



**PUBLIC COMMENTS AND RIDEM
RESPONSES REGARDING THE
REMEDIAL ACTION WORK PLAN
AND 50% DESIGN DRAWINGS**

FORMER JAMESTOWN LANDFILL

JANUARY 2006

**Prepared July 6, 2006
by RIDEM/Office of Waste Management**

**PUBLIC COMMENTS AND RIDEM RESPONSES
REGARDING THE
REMEDIAL ACTION WORK PLAN AND 50% DESIGN
DRAWINGS**

FORMER JAMESTOWN LANDFILL

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LETTER FROM DAVID B. VAN SLYKE (Preti, Flaherty,
Beliveau, Pachios & Haley LLP)**

Scott & Cindy Olsen
238 America Way
Jamestown, RI ZIP 02835

February 5, 2006

Mr. Chris Walusiak
RI Department of Environmental Management
Office of Waste Management
235 Promenade Street
Providence, RI 02908
FAX: 401-222-3812

Dear Mr. Walusiak,

With regard to the Jamestown Landfill, why has pump testing of the test wells not been undertaken? One of the concerns of the residents in Jamestown is the movement of contaminants via water via 'preferred fractures' in our fractured bedrock. These 'preferred fractures' act like a roadway for water to move quickly and draw contaminants with the water's movement. The landfill test wells need to pump as normal wells would pump, rather than be just a means for sampling water. The pumping will draw the water from the bedrock, where all our water is drawn. Pumping of the test wells will show if contaminants in the landfill will move with the movement of water. This needs to be known before any investment of tax dollars is made in a DPW Highway Barn on the site.

We have one source of water in Jamestown - our bedrock water. We cannot get water from any other community. Trying to get contaminants out of bedrock is endlessly expensive and in essence impossible. Once the vast highway underground in the bedrock starts moving contaminants out from beneath the landfill this will be destructive to us on the island - to our health, to our property and to our finances, both public and private. When the Rosehill Landfill, bordering South Kingstown and Narragansett, leaked recently the EPA and DEM, in a court decreed settlement, required the community to reimburse the EPA and DEM \$4 million dollars. Our new town administrator, Bruce Keiser, knows all about this settlement and spoke about it at the North End Concerned Citizen's public PowerPoint presentation.

Too much is at risk not to properly pump test the landfill wells to see what the wells will reveal. Let the water be drawn from beneath the landfill into the landfill test wells, sample it, laboratory test it and reveal the results to the public. Is it also within your regulatory rights to advise the town of Jamestown to select another site for the Highway barn? We are concerned about the risks associated with excavating this EPA registered CERCLIS contaminated landfill for an industrial building, pipelines, septic, drainage holding areas, filters, etc.. With not an inch of public water pipes on the north end of the island we are at risk here. Also, the community well draws from the same aquifer that we private wells owners draw from. This *aquifer community well* supplements the reservoir water when public water needs demand supplemental water. The island's water supply risks need to be seriously addressed and protected.

Sincerely,



Mr. Chris Walusiak
Rhode Island Department of Environmental Management
Office of Waste Management
235 Promenade Street
Providence, RI 02908

Dear Mr. Walusiak:

I am in favor of the proposed Jamestown landfill remediation project which includes reuse of the landfill for the highway garage. I support the proposed plan because it will improve groundwater protection while providing a much needed garage for the highway department.

I hope you will base your decision solely on good science and engineering and will not be influenced by political pressure.

Most Jamestown residents want to see the highway garage built at the old landfill. The best way to insure the remediation project will be funded by the voters is to keep the highway garage in the project.

I urge you to approve the combined landfill remediation/highway garage project as presented at the February 1st workshop.

Sincerely,

Mary P. Perry
signature

MARY P. PERRY
(print name)

13 Harbour St.
(address)

Jamestown, RI 02835

2/7/06
(date)

Jana Magarian
433 Schooner Ave
Jamestown, RI ZIP 02835

February 6, 2006

Mr. Chris Walusiak
RI Department of Environmental Management
Office of Waste Management
235 Promenade Street
Providence, RI 02908
FAX: 401-222-3812

Dear Mr. Walusiak,

Why was a hydrogeologic study of the island's water supply not completed before the Highway Barn design process was begun? We on Jamestown have a bedrock aquifer that isn't replenished by mountain water or a river. We rely on rain. Rainwater is stored beneath Jamestown in our fractured bedrock. The pockets hold the water; our wells drawn from the water pockets. Preferred fractures in the fractured bedrock move large quantities of water and can also move contaminants from beneath the landfill if the contaminants are disturbed. Why hasn't an assessment been done of our hydro (water) geology (bedrock)? This has been advocated in study after study over the years. Now this highway barn project comes along on our landfill, which since 1999 has been listed by the USEPA as a CERCLIS landfill because of hazardous wastes documented there. Do you now where the preferred fractures are? No one knows in reality. Do you know how the land and our wells will be impacted by the highway barn project? You can't.

A hydrogeologic study needs to be done first before any more taxpayer funds are spent on designing the barn on the landfill. We homeowners cannot risk losing our private wells to contaminants. If a full study is not done and contaminants get release into our only source of water this will not sit well with the islanders emotionally or legally. We do not want to be victimized twice - to lose our only source of water and then to pay for the study in retrospect in order to attempt to clean up the mess - a very, very expensive process of digging and searching in bedrock, one that may not find all the paths the contaminants slipped into. It's better to use sonar and x-ray viewing/analysis ahead of time as other communities have done when completing their bedrock hydrogeologic studies. Determine where the contaminants are in the landfill and determine the pathways available for contaminant migration before the highway barn is considered further. Why the cart before the horse?

Sincerely,

Jana Magarian

Karen & Arthur Lemke Jr. RECEIVED
805 East Shore Rd. D.E.M. / O.W.M.
Jamestown, RI 2006 FEB 13 P 12:21
ZIP 02835

February 6, 2006

Mr. Chris Walusiak
RI Department of Environmental Management
Office of Waste Management
235 Promenade Street
Providence, RI 02908
FAX: 401-222-3812

Dear Mr. Walusiak,

Of course the Jamestown landfill is unique. It sits on an Island, which is a sole source aquifer. There is no alternative water supply from either neighboring communities or municipal water. A highly fractured bedrock aquifer underlies the landfill permitting water to flow in many directions and for several miles.

Since 57% of residents on the Island depend on private wells, and the landfill has pollutants above safe drinking water standards, industrial activity and brownfield reuse could trigger release of those pollutants into the bedrock. Therefore private wells should receive the highest level of protection.

We ask you for the highest level of protection for our well water.

Sincerely,

Karen Lemke

450 Beacon Ave
Jamestown RI ZIP 02835

February 6, 2006

Mr. Chris Walusiak
RI Department of Environmental Management
Office of Waste Management
235 Promenade Street
Providence, RI 02908
FAX: 401-222-3812

RE: 50% design of the Highway Barn on the Jamestown Landfill

Dear Mr. Walusiak,

Why has the DEM not insisted the Vieira Farm wells, now property of the Jamestown Land Trust, be tested in 2006 – or tested previously in the 30% design phase of the highway barn? Those wells showed carcinogens – vinyl chloride and toluene – in both 1987 and 1992. GZA engineering said in 1992, and again last week at the February 2006 public workshop here in Jamestown, that the cancer causing contaminants came from the landfill. Two different engineering firms came up with contaminants in the 1987 and 1992. The North End Concerned Citizens have asked, and asked, and asked, that these wells be retested.

You need to contact the Land Trust board and ask that the old Vieira Farm wells be tested. Our only water supply – the same water supply that has shown vinyl chloride and toluene in well water tests near the landfill – is at risk. The risk needs to be assessed properly.

Sincerely,

RECEIVED
D.E.M. / O.W.M.
2006 FEB 10 PM 1:46
Dennis O'Dwyer

Date: 4/1/94

100-9-9-2-30

Chris Walusiak
RIDEM, Waste Management Office
235 Promenade St.
Providence, RI 02908

I urge you to stand up to the pressure you're getting from a vocal minority and let the town put the highway barn at the landfill. That's where most of the people of Jamestown want it and, if there's no evidence that it's going to hurt the ground water, that's where it should go.

Sincerely,

Signature: *Arthur E. Ronchie*

Name (print): *Arthur E. Ronchie*

Address: *46 Clinton Ave.
Jamestown, R.I.*

D.E.M. / O.W.M.

February 10, 2006

2006 FEB 14 P 12: 03

By Telefax and Electronic Mail

Mr. Chris Walusiak
Office of Waste Management
Rhode Island Department of Environmental Management
235 Promenade Street
Providence, RI 02908

Re: Comments on RAWP and 50% Landfill Design Drawings Report -
Jamestown Landfill - Jamestown, RI

Dear Mr. Walusiak:

I am writing on behalf of the North End Concerned Citizens ("NECC"), an unincorporated association of residents that live on the north end of Conanicut Island in the Town of Jamestown. This letter and the attached letter from NECC's engineering firm, MACTEC Engineering and Consulting, Inc., presents comments on the report entitled "RAWP and 50% Design Drawings - Former Jamestown Landfill - Jamestown, Rhode Island" prepared by GZA GeoEnvironmental, Inc. and dated December 2005 (hereinafter "50% Design").

As is clear from the comments of MACTEC, the proposed closure of this landfill is not in compliance with applicable law and will not be adequately protective of public health and the environment. This unclosed former town dump is surrounded by residences whose only source of drinking water is groundwater; there is not (and, per the Town's own statements, never will be) a public water supply system available in the northern part of the island. Further, this landfill is in an island setting involving a geologically sole source aquifer. Closure of the landfill must occur in a manner that ensures, to the maximum extent possible, that such closure will be protective of the aquifer. Unfortunately, the proposal identified in the 50% Design does not do that. There are numerous reasons for that, many of which are identified and discussed in depth in the attached MACTEC letter. The major points, however, are as follows:

The Site has been inadequately characterized. The monitoring well network is insufficient to identify the true nature and extent of actual and potential landfill impacts. In particular, the horizontal spacing of the existing monitoring well system is too sparse, there are no monitoring wells installed in the overburden across the upper-most aquifer, there are no well pairs to determine vertical gradients and inadequate pump testing has been undertaken. Further, the Town Department of Public Works (DPW) facility was not contemplated on the property during the site investigation, and in particular, that investigation did not include placement of a DPW facility on the landfill property as part of the remedial alternatives analysis.

The landfill cover system is inadequate and does not comply with RIDEM regulations or its Landfill Closure Policy. The soil cap proposed does not control sources of or manage migration of contaminated groundwater. That cover system is not a low permeability cap; therefore, rainwater will continue to percolate down through the waste and leach out contaminants into groundwater that can and will travel off-site or into fractured bedrock below the site.

The site does not have an adequate post-closure environmental monitoring program. The post-closure environmental monitoring program ("EMP") that RIDEM approved for the site is based on a closure plan that is itself based on (a) a faulty site investigation and, more importantly, (b) a completely different closure approach (and even a completely different 30% design). In particular, the EMP approved by RIDEM was for a simple (although still inadequate) landfill closure, as proposed by the Town in a 30% design submitted in October 2004. Subsequently the Town added a whole new and dramatically different component to the landfill closure project – the town garage with associated parking areas and a significant stormwater management system. A new 30% design was submitted on July 8, 2005. The 50% Design is almost completely new again, as compared with the second 30% design. Yet the old EMP based on the original (no garage) design with only minor tweaks has now been proffered as acceptable. That certainly is not the case.

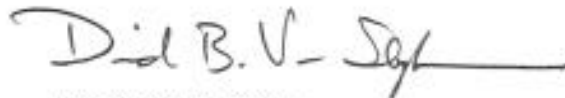
The proposed landfill closure design allows the Town to avoid stormwater management requirements by increasing stormwater discharge into landfill waste, thereby creating more landfill leachate that will threaten the island's aquifer. If the Town properly closes the landfill with an appropriately low permeability cap, design of the town garage and associated facilities will become very difficult and very expensive, as the stormwater runoff that will result will have to be managed on-site in accordance with state and federal law. By allowing stormwater to infiltrate into the soils and the waste in order to avoid having to appropriately manage that stormwater, landfill wastes will not be isolated and contaminated landfill leachate will continue to be generated. That is the reason, for example, why the Town's 50% Design did NOT comply with RIDEM's requirement that all on-site roadways be paved and the compost pile area be paved – if that occurred, the design would result in generation of too much stormwater to legally manage on-site.* The Town and RIDEM have a choice – protect the island's groundwater by designing an appropriate cap with sufficient stormwater management, or approve the current design, build the Town garage and let the contaminated landfill

* The Jamestown Landfill currently may very well be in violation of federal and state stormwater rules. The Town, as the operator of an active or inactive landfill, is required to maintain coverage pursuant to and abide by the conditions of the "Rhode Island Pollutant Discharge Elimination System Storm Water Discharge Associated with Industrial Activity" (MSGP) and the "Rhode Island Pollutant Discharge Elimination System Storm Water Discharge from Small Municipal Separate Storm Sewer Systems and from Industrial Activity at Eligible Facilities Operated by Regulated Small MS4s" (MS4GP). Since the stormwater runoff from the Landfill contains non-permitted pollutants (e.g., leachate), that runoff does not appear to be covered by the MSGP or the MS4GP and the Town, therefore, may be subject to federal and state enforcement action under the Clean Water Act and state law.

leachate continue to be generated, threatening the aquifer and drinking water wells. Boiled down to that essence, the Town's "damn the torpedoes, full speed ahead" approach is simply not sound, and RIDEM should not approve the current plan.

Thank you for the opportunity to submit comments on the 50 % Design. We look forward to the Department's response to all of these comments, and are available at your convenience to meet with the Department or to otherwise respond to any questions that you or others at RIDEM may have regarding these comments.

Very truly yours,

A handwritten signature in dark ink, appearing to read "D. B. Van Slyke", with a long horizontal flourish extending to the right.

David B. Van Slyke

Enclosure
(MACTEC 2/10/06 letter and attachments)

cc: W. Michael Sullivan - Director, RIDEM
Leo Hellested, PE - OWM, RIDEM
Laurie Grandchamp - OWM, RIDEM
Alicia Good, PE - OWR, RIDEM
Angelo Liberti, PE - OWR, RIDEM
Russell Chateaufneuf, PE - OWR, RIDEM
Robert Vanderslice - RIDOH
Ira Leighton, Deputy Regional Administrator, EPA New England



engineering and constructing a better tomorrow

Jamestown 50% Design
Public Comment# 8
Jeff McCrady, Stephen H.
Mitchell P.E.

W.L.M. / O.W.M.

2006 FEB 14 P 12:03

February 10, 2006

Mr. Chris Walusiak
Rhode Island Department of Environmental Management
Office of Waste Management
235 Promenade Street
Providence, Rhode Island 02905

Subject: **Jamestown Landfill Closure**
Review of GZA GeoEnvironmental 50% Design Submittal

Dear Mr. Walusiak:

At the request of North End Concerned Citizens (NECC), MACTEC Engineering and Consulting, Inc. (MACTEC) has undertaken a review of the GZA GeoEnvironmental, Inc. 50% Design Submittal for the Jamestown landfill closure on North Main Road in Jamestown, Rhode Island. The comments and questions detailed in this letter are submitted on behalf of NECC and are based on MACTEC's review of the following documents:

- "RAWP and 50% Design Drawings, Former Jamestown Landfill, Jamestown, Rhode Island" prepared by GZA GeoEnvironmental, Inc., dated December 2005.
- 50% Town of Jamestown Proposed Improvements to the Former Jamestown Landfill, North Main Road, Jamestown, Rhode Island, 50% Submission, December 2005, by GZA GeoEnvironmental, Inc, Drawings C-1 through C-10.
- "Jamestown Landfill Closure, Remedial Action Work Plan and 50% Design, Public Workshop" presentation slides by GZA GeoEnvironmental, Inc., dated February 1, 2006.
- "Jamestown Landfill Closure, GZA GeoEnvironmental 30% Design Re-Submittal Review" letter to Mr. Raymond Iannetta from MACTEC Engineering and Consulting, Inc., dated August 22, 2005.
- "30% Landfill Closure Design Re-Submittal, Addition of Proposed DPW Facility, Former Jamestown Landfill, Jamestown, Rhode Island" prepared by GZA GeoEnvironmental, Inc., dated July 8, 2005.
- "Jamestown Landfill Closure, 30% Design Review and Town Highway Barn Proposal" letter to David Van Slyke, Esq., PretiFlaherty from MACTEC Engineering and Consulting, Inc., dated April 21, 2005.

These comments are organized as follows: First, we have reviewed the 50 % design submittals (50% Design Submittal) identified in the first three bullets above and have prepared comments on those documents. Those comments are organized by subject for ease of reference by the Rhode Island Department of Environmental Management (RIDEM). Second, we have compared the 50% Design Submittal to the review comments previously provided to RIDEM and the Town in the MACTEC letter of August 22, 2005 on the 30% Design Re-Submittal. To the extent that the Town

[through GZA GeoEnvironmental, Inc. (GZA)] has not addressed the prior MACTEC comments on the 30% Design Re-Submittal and those comments still pertain to the 50% Design Submittal, MACTEC has flagged each of these as an outstanding issue.

Comments on the 50% Design Submittal

Site Background / Site Investigation Summary

1. Page 2, 2nd bullet – The text states that “borings and test pits conducted on-site describe cover material as sand and silt, sand some silt, and sand with trace silt. We believe that cover soils immediately over the waste generally consist of low permeability reworked native Glacial Till which is locally overlain by more uniform soils.”

If the actual borings and test pits describe existing cover materials as one thing, why does GZA “believe” that cover soils immediately over the waste consist of something else? This is important because unless an alternative with specific criteria has been approved by RIDEM, federal regulations (40 CFR 258.60) require that “owners and operators of all MSWLF units must install a final cover system that is designed to minimize infiltration and erosion. The final cover system must be designed and constructed to: (a) Have a permeability less than or equal to the permeability of any bottom liner system or natural subsoils present, or a permeability no greater than 1×10^{-5} cm/sec, whichever is less, and ...”

GZA is proposing to use the existing cover soils to meet the 2-foot soil cover. Cover soils should not be more permeable than the underlying glacial tills. Is there any data available for the field measured permeability of the underlying glacial till soils? How will the cover soils be assessed to ensure that the permeability is less than or equal to the permeability of the natural subsoils or are less than 1×10^{-5} cm/sec?

2. Page 2, 3rd bullet – Text states “laboratory testing of cover materials for metals, VOCs and SVOCs provided only limited Method 1 exceedances.”

Was any testing of the cover materials and/or underlying materials done to evaluate the presence of pesticides, PCBs and/or dioxins/furans? The origin and type of wastes disposed in this landfill is not completely documented. Early reports suggest that Navy transformers may have been disposed in the landfill. It is not clear whether materials were ever burned in the landfill. In that existing cover soils have been reported to range in thickness from 0.1 to 5 feet thick, it would be appropriate to test cover soils for pesticides, PCBs, dioxins and furans before these cover soils are stockpiled and used again for final cover as proposed in the 50% Design Submittal.

3. Page 2, 4th bullet – Text states “Four consecutive rounds of groundwater monitoring were completed at the Site, resulting in the collection and laboratory testing of 48 groundwater samples from as many as 13 existing and newly installed wells.”

This statement does not provide a clear explanation of the ongoing groundwater monitoring activities at the landfill. The four most recent consecutive rounds of groundwater monitoring consisted of a monitoring network that included a total of 6 wells. A seventh well location (GZ-7S and 7D) was brought into the monitoring well network in July 2005. To date, only two rounds of samples from this very important downgradient well pair have been collected. It is

important to note that another of the important downgradient well locations (EA-2D) is not able to be sampled periodically due to insufficient water in the well. Many of the other wells that have been sampled at the site have only been sampled sporadically and many of these wells were not installed in accordance with current industry standard monitoring well installation specifications. Data from these wells should not be used for characterization of groundwater quality at the site.

It also should be pointed out that the Table on Page 3 of the GZA RAWP does not reflect a groundwater sample from the December 2004 monitoring round collected from monitoring well GZ-3. Copper was detected in that sample at a concentration (1.34 mg/l) that exceeds the federal maximum contaminant level (MCL) concentration of 1.30 mg/l.

4. Page 3, 1st bullet – This section summarizes the results of landfill gas monitoring program. To date, the landfill gas monitoring program has been limited to evaluating the presence of methane only.

In that the origin and nature of wastes disposed in this landfill is largely unknown, and that volatile organic compounds (VOCs) continue to be detected in the groundwater, it is recommended that further landfill gas monitoring be conducted to evaluate the presence and location of residual VOCs, semi-volatile organic compounds (SVOCs), and/or petroleum hydrocarbons in subsurface soil, waste, and/or groundwater. Passive soil gas sampling and screening is a widely used technology that is used to detect the presence and location of these contaminants.

Remedial Actions- Groundwater

5. Page 10, 1st Paragraph – The RAWP states that “The EMP for the closure and post-closure periods of the landfill operation was developed by GZA, submitted to RIDEM in October of 2004, and approved by the Office of Waste Management (OWM) in November of 2004. In response to RIDEM’s comments on the 30% Landfill Closure Design Submission, GZA has prepared an addendum to the EMP that includes an additional monitoring location designated PWSW. A copy of the addendum is attached in Appendix D.”

The Environmental Monitoring Plan (EMP) submitted by GZA in October 2004, and approved by RIDEM in November 2004 was prepared prior to the current 50% design and *does not* take into account the proposed landfill consolidation activity or the construction of the Jamestown Department of Public Works (DPW) Facility on the site. The RIDEM Solid Waste Regulations (RIDEM, January 1997) referenced in GZA’s EMP dated October 2004 requires that a post-closure monitoring and maintenance operations manual be prepared, and that this manual “must provide personnel with detailed instructions for assuring efficient monitoring, leachate management which would include recording of the total volume of leachate stored and removed from the facility, sampling and analysis, and proper maintenance of all facility components to maintain the facility and meet the requirements of this rule for a minimum period of 30 years after landfill closure.” Based on the proposed 50% Design Submittal, it would be expected that the groundwater flow direction and geochemistry will change, potentially significantly, due to the proposed stormwater management plan, alterations to site grading and land use, and the groundwater extraction from well PWSW. Therefore, a new EMP that *assures efficient monitoring, sampling and analysis for a minimum period of 30 years after landfill closure* should be developed and approved by RIDEM. Specifically, the EMP should, at a minimum, include the following:

- A clear understanding of potential flow pathways for groundwater and potential contaminant transfer from all site activities in both the overburden and bedrock aquifer systems. To date, there has been insufficient aquifer analysis and there are no monitoring wells in the proposed monitoring well network that are screened in the overburden across the upper most aquifer. All wells are screened in the bedrock at least 13 feet below the water table; and
 - A sufficient number and appropriate location of monitoring wells to effectively monitor wastes left in place and act as an early warning system should there be a release (fuel, hydraulic fluid, other) from the proposed Town DPW maintenance activities. The current monitoring well network that has downgradient wells spaced between 250-300 feet apart is insufficient to monitor even the current site. The planned future activities further indicate that a fresh evaluation of the number, location, and spacing of the site monitoring network is required.
6. Page 10, 2nd Paragraph – The text summarizes the applicability of a GB classification designation for groundwater beneath “inactive landfills” and “inactive land disposal sites for solid wastes, hazardous wastes and/or sewage sludge” and references a letter of approval for RIDEM changing the Site’s groundwater classification from GA to GB.

The groundwater immediately under the landfill has only very recently been reclassified as GB (meaning that it may not be suitable for drinking water use without treatment due to known or presumed degradation), while the groundwater adjacent to the landfill is GA (which means it is a groundwater resource which is known or presumed to be suitable for drinking water use without treatment). This reclassification was done well after the now out-dated post-closure groundwater monitoring plan was proposed and approved (see Comment 5, above). Our questions are:

- How will the Town be required to monitor the GB/GA classified areas?
- What will be the requirement to insure that there are no exceedences of standards in the groundwater downgradient of the landfill that is classified as GA?
- Will there be monitoring wells placed in both the GB and GA groundwater regimes to ensure that any trends in the GB are detected before the GA water is adversely impacted?

Landfill Cover System

7. The landfill cover system in the 50% Design Submittal is grossly inadequate given the regulatory requirements, the site specific conditions, and the sensitivity of the surrounding environment. Attachment A is a side-by-side comparison of the cross section of a typical landfill cap and that proposed for the Jamestown Landfill. Why would or should the Town of Jamestown Municipal Solid Waste (MSW) Landfill be closed to a standard less than the minimum standard as prescribed in the RIDEM *Solid Waste Regulation No. 2, Solid Waste Landfills*? The RIDEM *Closure Policy for Inactive or Abandoned Solid Waste Landfills*, March 2001, under which the Jamestown Landfill Closure is being administered states in Section 3.0 of the policy:

This policy, which is the first step in the implementation of the LCP [Landfill Closure Program], is being established to clarify the applicability of current regulations and as an

acknowledgement that improper closure or abandonment of solid waste landfills may pose a threat to human health or the environment through actual or potential releases of hazardous materials to soil, sediments, groundwater, surface water, or air. Older landfills may pose an increased risk because there were no restrictions on the types of wastes accepted, resulting in the possible disposal of hazardous materials, hazardous wastes, liquid wastes and industrial wastes into many of these landfills. Coupled with the lack of requirements for liners and run-on/runoff controls, groundwater and surface water resources may be compromised. These factors formed the rationale in the 1980's and early 1990's for placing all known landfills in Rhode Island on the EPA CERCLIS list of hazardous waste sites.

The objectives of this Policy are:

- 1. To address actual or potential human health and environmental risks which may have resulted from abandonment or incomplete closure of landfills.*
- 2. To satisfy all applicable state and federal regulations regarding solid waste facilities and remediation of contaminated sites in a single coordinated review process, potentially resulting in a Letter of Compliance from the Rhode Island Department of Environmental Management (the Department or DEM), a letter of No Further Action from the US Environmental Protection Agency (EPA) and archival from CERCLIS, based on the 1997 SuperFund Memorandum of Agreement (SMOA) between EPA and DEM.*
- 3. To facilitate potential limited reuse of landfill property once adequate investigation, risk assessment, and if necessary, remediation have been completed at the site. The allowable types of reuse would be stipulated on a land usage restriction recorded in the municipal land evidence record of the property.*

The Landfill Closure Policy goes on to state in Section 4.0 that:

Without a Certificate of Closure, the landfill is deemed operating and must comply with all current statutes and regulations. Therefore the Department has authority to enforce the landfill closure requirements of current Solid Waste Regulations, which reflect the most current and best available solid waste landfill closure standards to address potential threats to human health and the environment.

In light of the RIDEM policy that is clearly applicable to this situation (Jamestown Landfill does not have a Certificate of Closure), why are the cover system requirements detailed in the RIDEM Solid Waste Regulation No. 2, *Solid Waste Landfills* considered not applicable in the closure of the Jamestown Landfill? Clearly, GZA and the Town have relied upon RIDEM, *Solid Waste Regulation No. 2* in other aspects of the closure program being proposed here. Attachment B includes a list of applicable landfill closure standards along with an indication of whether the Jamestown proposed closure meets the standard.

8. RIDEM solid waste program is a delegated from the Federal program and must be consistent with and no less stringent than the Federal program. The Federal regulations applicable to this situation are found at 40 CFR 258.60, which has clear requirements for MSW final cover systems. Subpart F (Closure and Post-Closure Care), Section. 258.60, Closure Criteria, states as follows:

- (a) Owners or operators of all MSWLF [Municipal Solid Waste Landfill] units must install a final cover system that is designed to minimize infiltration and erosion. The final cover system must be designed and constructed to:*
 - (1) Have a permeability less than or equal to the permeability of any bottom liner system or natural subsoils present, or a permeability no greater than 1×10^{-3} cm/sec, whichever is less, and*
 - (2) Minimize infiltration through the closed MSWLF by the use of an infiltration layer that contains a minimum 18-inches of earthen material, and*
 - (3) Minimize erosion of the final cover by the use of an erosion layer that contains a minimum 6 inches of earthen material that is capable of sustaining native plant growth.*
- (b) The Director of an approved State may approve an alternative final cover design that includes:*
 - (1) An infiltration layer that achieves an equivalent reduction in infiltration as the infiltration layer specified in paragraphs (a)(1) and (a)(2) of this section, and*
 - (2) An erosion layer that provides equivalent protection from wind and water erosion as the erosion layer specified in paragraph (a)(3) of this section.*
 - (3) The Director of an approved State may establish alternative requirements for the infiltration barrier in a paragraph (b)(1) of this section, after public review and comment, for any owners or operators of MSWLFs that dispose of 20 tons of municipal solid waste per day or less, based on an annual average. Any alternative requirements established under this paragraph must:*
 - (i) Consider the unique characteristics of small communities;*
 - (ii) Take into account climatic and hydrogeologic conditions; and*
 - (iii) Be protective of human health and the environment.*

Why are these minimum landfill closure requirements of the Federal regulations considered not applicable? Even assuming that the RIDEM Director has the discretion under the Federal rules to allow alternative requirements for barriers (per 40 CFR 258.60(b)), it is clear that the Director must consider, among other things the hydrogeologic conditions of the landfill location and that any decision on an alternative must be protective of human health and the environment. Jamestown is a small island community with a limited potable drinking water supply and historical water shortages. Without available potable water source options, the residents of the North End must rely solely on their private wells for water supply. The hydrogeologic conditions of the Site present a risk to the groundwater quality of private drinking water wells that lie downgradient of the landfill. Historical groundwater monitoring has already shown detection of many contaminants on the downgradient side of the landfill with several exceedences of the state or federal standards. These factors not only suggest that the minimum state/federal standard for landfill closures are applicable but argue towards a more protective closure of the landfill. A more stringent closure will provide the maximum practicable protection from stormwater infiltration into underlying waste. This will minimize the generation of leachate that is currently allowed to discharge to groundwater and potentially migrate outside the limits of the landfill.

- 9. Since the state and federal regulations require a barrier/infiltration layer to minimize infiltration through the landfill cover system to the underlying waste, how does an existing soil cap with no known permeability standard satisfy the minimum standard for MSW landfills of both the state and federal regulations?

10. If the Town proposes to construct a landfill cover system that does not meet the requirements of state and federal regulations, then an application for a variance must be submitted to RIDEM by the Town in writing for review, comment, and approval. Such a request has not been made to our knowledge (if it has been made, please provide a copy to the undersigned). Further, should such a request be made (and in this case, it must be made or the remedy will be subject to challenge), because "a substantial question exists as to the environmental or public health impacts of such a variance," a public hearing should be required by the Director. These variance procedures are quite clear under Rhode Island regulations. See RIDEM Solid Waste Regulation No.1, Section 1.10.00

Site Stormwater Management

A complete 50% Design Submittal was not available for comment at the time of this review. In particular, Appendix C, entitled "Hydrologic Analysis and Stormwater Detention and Conveyance Design" was not available for public download from the Town of Jamestown website. Hence, a detailed analysis of the stormwater management system design was not completed since supporting calculations were not available. Once such information is received from the Town, such analysis will be undertaken and provided to RIDEM. While MACTEC (and NECC) reserve the right to provide further comments in this regard, MACTEC does have significant comment on the stormwater management issues associated with this project based on the information provided. Such comments follow.

11. As stated in the February 1, 2006 Workshop and the 50% RAWP, the landfill occupies approximately 10 acres of the 14-acre town property. Including the existing Transfer Station development, a significant portion of the Site (an 8.74-acre drainage area) drains toward North Main Road. Post closure, it is proposed that the drainage toward North Main Road is reduced to 7.15 acres. However, an additional 0.88 acres of the drainage area is converted to impervious area as a result of the construction of the DPW Facility, associated access drive, and parking lot. This 12 percent increase in impervious area adds to the stormwater volume that requires treatment for quality. The total volume of stormwater runoff is also increased, requiring a larger stormwater management system to handle runoff quantity. How can the Site handle both this quantity and quality of stormwater? Won't the problem be exacerbated when additional impervious areas are added to address comments presented by RIDEM on the 30% Design Re-Submittal (all on-site roads and the compost pile area must be paved)? In addition, as the landfill cover system design is upgraded to comply with the RIDEM regulations, there will be an increase in stormwater runoff from the landfill cap. How will the stormwater system be modified to manage that increased stormwater runoff?
12. RIDEM's 30% Landfill Closure Design Re-Submittal comment letter dated September 6, 2005 stated that "In order to preserve the thickness and integrity of the final cover placed over the limits of the landfill, all areas that will encounter vehicular traffic shall be paved. These areas would include the existing gravel roadway as well as the footprint of the existing and proposed composting areas." These areas not proposed to be paved as requested by RIDEM. If they are paved, is it possible to fit into the site development an adequate stormwater management system capable of handling the additional quantity and quality volumes of stormwater associated with this increased impervious area? It is our opinion that protection of the thickness and integrity of the landfill cover system is paramount and should not be compromised to maximize the Site's post-closure development. Is the issue of managing stormwater exacerbated because the footprint of the proposed Town DPW Facility and parking

- lot is too large to accommodate, on-site, both appropriate stormwater management and that facility?
13. With a state/federal standard low permeable cover system installed over the landfill can the Site's stormwater management systems still detain and treat the associated stormwater quality and quantity volumes?
 14. What runoff curve number was used in the stormwater model for areas of the landfill where no cover system construction is proposed, versus areas of the landfill where additional cover soils are proposed?
 15. A majority of stormwater quality is proposed to be treated by infiltrating the collected runoff into the subsurface soils at Water Quality (WQ) Basin No. 1, WQ Basin No. 2, and Detention Basin No. 2. We are concerned particularly with WQ Basin No. 2 and Detention Basin No. 2, both of which rely on infiltration of the stormwater to provide treatment and improve runoff quality. Detention Basin No. 2 infiltrates surface water just upgradient of the landfill boundary and WQ Basin No. 2 infiltrates partially within the landfill boundary. As a result, this surface water will be introduced as groundwater. This groundwater then flows through the landfill waste and becomes leachate. The proposed stormwater control system will have the net effect of increasing leachate generation at the landfill and may alter the hydrologic conditions of the Site by concentrating infiltration at the structure locations. This is not an acceptable approach to managing the post closure stormwater runoff at the Landfill.
 16. WQ Basin No.1 and a portion of WQ Basin No. 2 receive surface water runoff directly from portions of the paved access entrance. The runoff from these areas is likely to be heavily laden with sediment due to winter sanding, DPW truck haul traffic, etc. No sediment forebays are provided for either basin. As a result, won't the sediment volumes collected from these runoff areas collect on the bottom of the basins and work to impede and eventually clog the soils of the basin bottom? And won't this significantly reduce and/or prevent infiltration over time. When this occurs, the degraded basins will no longer function as water quality treatment measures.
 17. A stormwater control outlet from the landfill property portion of drainage area 5 is proposed to discharge to adjacent Lot 47. This outlet, from an industrial site, is discharging on land set aside (and zoned) for future residential development. This is an industrial activity on a lot zoned residential. Is the Town proposing to obtain a variance?
 18. Stormwater discharge from landfill drainage areas 2 and 3 is proposed to continue post closure. This discharge occurs to a wetland on private residential property. Has the Town discussed this with the property owner? What are the ramifications of this?
 19. The level spreader, designed to convert concentrated flow from Water Quality Basin No. 2 to sheet flow prior to discharging to the wetland along the west side of North Main Road, is proposed within the road right of way only 7 feet from the edge of pavement. The proposed location is in an area historically used as a turn-out for turning vehicles entering and exiting the Transfer Station. The 80 foot long level spreader will function as designed only if it remains at a constant elevation. Its location and proximity to vehicle traffic render it highly susceptible to damage. What measures will be taken to insure the level spreader remains functional and effective long term?
 20. The outlet from Detention Basin No. 2 discharges to a riprap apron on Lot 47. A level spreader is required at this outlet location to convert the concentrated flow from peak storm events to

sheet flow. Otherwise, erosion at the outlet is possible. See also Comment 18 regarding the fact that this lot is not zoned for such industrial activity.

21. It is assumed that the Town will perform the necessary inspections and monitoring associated with the SWPPP as well as the Landfill Post Closure Monitoring and Maintenance Plan. Has a Post Closure Monitoring and Maintenance Plan been prepared? Are financial assurances being required to ensure funds are available for implementing the necessary inspections, monitoring, and maintenance of the Site post closure?

Site Point Discharges

22. The 50% RAWP discusses the existence of Transfer Station floor drains and an associated storage tank. Where is this storage tank located and where does it outlet on site? Is there an uncontrolled outlet releasing runoff from the tipping floor of the Transfer Station? Is leachate (waste contacted water) being released to surface water or is it being discharged directly to groundwater?
23. It is assumed that the existing Transfer Station/Office provides sanitary facilities for its employees. Are temporary facilities currently in use or do the on-site buildings include a restroom? How is wastewater currently handled on-site and how will it be modified once the new DPW Facility is constructed?
24. Are floor drains proposed in the maintenance garage bays of the new DPW Facility? Where will the floor drains outlet on site? Will those be discharged into the stormwater system? Will they discharge into surface water, or will that discharge be to groundwater? How will the release of contaminants associated with vehicle maintenance (oil, fluids, fuel, etc.) be prevented and managed if they were to occur?
25. The underdrain outlet of the proposed concrete retaining wall is a potential source of landfill leachate collection and release as surface water. See 30% Re-Submittal Comment 9 discussion, below.
26. Will the DPW Facility Building Foundation include an underdrain system?. If so, where will this system outlet on site?
27. The Landfill and Transfer Station is currently required to have a Stormwater Pollution Prevention Plan (SWPPP). Does one exist, and if not, why not? Whether one exists now or not, such a plan must be prepared/updated to address all identified point discharges for the Site. The Plan is required to recommend appropriate pollution prevention measures for all industrial activities associated with each discharge point. Prescribed monitoring, and corrective/response action plans also must be included. This is a requirement currently applicable to the Town pursuant to the "Rhode Island Pollutant Discharge Elimination System Storm Water Discharge Associated with Industrial Activity" (MSGP).
28. The Town, as the operator of an active or inactive landfill, is required to maintain coverage pursuant to and abide by the conditions of the "Rhode Island Pollutant Discharge Elimination System Storm Water Discharge Associated with Industrial Activity" (MSGP). Has the Town complied with those requirements? To the extent that storm water runoff from the Landfill is contaminated [contains non-permitted pollutants (e.g., leachate)], that runoff would be an illegal discharge not covered by the MSGP. Will this RAWP and 50% Design comply with those requirements?

29. The Town is also subject to the requirement to obtain coverage under the "Rhode Island Pollutant Discharge Elimination System Storm Water Discharge from Small Municipal Separate Storm Sewer Systems and from Industrial Activity at Eligible Facilities Operated by Regulated Small MS4s" (MS4GP). Has the Town complied with those requirements? Among other things, the MS4GP requires the Town to prohibit, through an ordinance, non-storm water discharges into the system that are not authorized under the MS4GP or another RIPDES permit. The Town has proposed such an ordinance and is or will be subject to it when enacted. Again, to the extent that runoff from the Landfill contains non-permitted pollutants, these are not authorized under the MS4GP. Since such discharges are not authorized under another RIPDES permit, the Town may be subject to potential enforcement under state and federal laws.

Landfill Gas Management

30. Refer to 30% Re-Submittal Design Comment 20. While it is understood that gas monitoring at the property boundary is proposed at the installed gas probes, inadequate detail is provided. What locations will be sampled, all 15 probes? What are the corrective and response actions if gas is measured above 25 percent of the Lower Explosive Limit (LEL)? If an elevated concentration of methane is measured at the property boundary will RIDEM and the adjacent property owners be notified?
31. The 50% RAWP states that a continuous methane monitoring system with alarms will be installed in the DPW Facility. What are the response and corrective actions required for detections of methane in the DPW buildings? As part of the maintenance activities at the facility what type of activities are restricted? Would "hot work" (e.g. welding) be allowed in the garage?
32. The gas monitoring program at the property boundary and systems in the DPW Facility, are no substitution for providing a gas venting system at the source of the gas generation, the landfill. Gas management is integral to any MSW landfill closure. Gas generation rates and flow directions can change over time due to the age and decomposition rate of the waste, the ambient temperature, the groundwater/leachate elevation within the waste mass, and/or waste subsidence/settlement. A simple passive gas venting system can promote preferential pressure gradients that allow the gas to release to the atmosphere. We recommend that a gas venting system be installed as a reasonable proactive approach to managing gas at the landfill rather than initiating a reactive approach of periodic monitoring with implemented responses when a problem is discovered.

Waste Excavation, Handling, and Disposal

33. The RAWP indicates that the waste materials from the demolition of the on-site sheds could be disposed of at the Jamestown Landfill. We do not recommend that this construction and demolition debris (C&D) waste be disposed of at the landfill. With limited filling and grading proposed as part of the closure, it would be difficult to properly place, compact, and cover the C&D waste.
34. The "Solid Waste Excavation Practices" section of the *Soils Management Plan and Waste Handling Contingency Plan* permits the separation of clean from "contaminated waste" based on visual, olfactory, and PID monitoring. Metal contaminants have been historically measured

in groundwater and are likely to be at measurable levels within the waste and/or cover soils. None of these proposed methods can determine what type and concentrations of metals are present. All waste should be laboratory tested at a prescribed frequency prior to classifying and segregating.

35. The "Soil and Solid Waste Stockpiling/Storage Practices" section of *Soils Management Plan and Waste Handling Contingency Plan* states that waste materials [that have been excavated] may be relocated to beneath paved areas. This statement should be modified to include the requirement that wastes can only be relocated to paved areas within the footprint of the existing landfill.

Erosion and Sedimentation Control

36. Drawing C-5, "Erosion and Sedimentation Control Plan, Details, and Notes" indicates that staked hay bales, silt fence barrier, and/or combinations of silt fence barrier with staked hay bales will be used at the limit of all disturbed areas of the Site. We do not recommend the installation of staked controls for erosion protection within the limits of the landfill boundary. Every stake creates a penetration through the soil of the cover system. While small in size, the number of stakes required to properly install hay bales and silt fence would be numerous over the several hundred feet of siltation barrier proposed. Since grading over the landfill is minimal, many of the impacted areas would not be repaired once construction was complete. Instead, filter berm constructed of wood waste compost/bark is a better alternative since it does not require penetrations of the existing landfill cover soil.
37. Several drainage channels are proposed to be constructed within the landfill boundary to convey concentrated stormwater across the landfill. All channels should be lined with riprap, turf reinforcement, or erosion control matting depending on the velocity of flow and constructed slope to prevent erosion of the cover system soils and promote establishment of vegetative cover where applicable.

Yard Waste Compost Area

38. The "Final Gravel Surfacing Section" on drawing C-8 if applied to the proposed Yard Waste Compost Area expansion will not meet the requirements of RIDEM *Solid Waste Regulation No. 8- Solid Waste Composting Facilities*. Paragraph 8.2.02(J) of the RIDEM Regulation requires a minimum 2 foot thick compost pad above the existing cover system of the landfill. Therefore, given the proposed 2 foot cover system, a minimum of 4 feet of fill (cover and pad) must be installed over any portion of a landfill used for composting activities. The detail on C-8 only requires 3.5 feet total.
39. The contours within the proposed compost expansion area do not depict the addition of any fill. Unless test pitting can verify that the existing depth of cover soil is greater than 4 feet (as performed for other areas of the landfill), the proposed contours should reflect 4 feet of imported fill in the expansion area. It should also be noted that maximum allowable composting pad grades are between 2 and 5 percent per the RIDEM Regulation. Areas of the existing topography indicate slopes as steep as 7 percent.
40. Has test pitting occurred within the limits of the existing Yard Waste Compost Area to verify the existing thickness of cover soil? The total thickness of the compost pad is required to be 2

feet minimum above the proposed cover system. Therefore, given the proposed 2 foot cover system, a minimum of 4 feet of soil cover must be installed over any portion of a landfill used for composting activities. Additional fill may be required over the existing compost area to provide the total 4 foot depth as well as to blend with the adjacent expansion area.

Site Utilities

41. The sewer forcemain from the lift station to the leaching field is shown as 1-1/2-inch PVC on the "Hydraulic Profile ISDS System" on drawing C-7. Per SD 8.05, the minimum pipe size shall be 2 inches. The regulation section SD 8.05 is stated as follows

Piping - When alternating pumps are provided, discharging to separate fields, the pump discharge lines shall be inter-connected and provisions made to permit dosage of both fields with one pump when the other is being serviced. The pump discharge shall be at least 2 inch diameter for systems designed to dispose of under 1,000 gallons per day, and at least 3 inch diameter for systems designed to dispose of 1,000 gallons per day or over.

42. The simplex pump system proposed for the Individual Sewage Disposal System (ISDS) does not meet the requirement of SD 8.01 stated as follows:

General - Pumps shall be located following septic tank unless otherwise approved by the director. In the case of single family residence system, one pump may be installed. In all other cases, dual alternating pumps shall be required.

43. The notes of "Detail Distribution Box" detail on drawing C-7 make reference to a Massachusetts regulatory standard. This statement should be replaced with a similar statement making reference to the appropriate RIDEM standard.
44. Is 200 gallons per day (gpd) an adequate water supply for the occupancy and use of the Transfer Station and DPW Facility? Are large quantities of water anticipated for maintenance activities such as washing/cleaning vehicles? The GZA workshop presentation stated that a pump test performed on the Lot 47 groundwater well at 200 gpd showed that the cone of influence did not extend within the limit of the landfill. Does RIDEM have the results of this pump test? If so, please provide any data and report(s) on that test to the undersigned. If it is reasonable to expect the maximum daily water usage at higher rates than 200 gpd, then an additional pump test should be performed to insure that withdrawal at the higher rate does not drawdown water from beneath the landfill. Last, will the water supply well be subject to public water supply system requirements?
45. The proposed watermain design for sections of pipe installation within the landfill footprint calls for the addition of a 4-inch schedule 40 PVC jacket pipe with solvent joints. The stiffness of PVC along with the unpredictable compatibility of the solvent with the landfill leachate suggests that an alternate pipe jacket material should be considered for this water supply system that will be attempting to provide potable water to the DPW Facility. A dual containment high density polyethylene (HDPE) pipe with butt fusion joints may provide better performance for the given installation environment.

Miscellaneous

46. The existing gravel roadway as depicted on drawings C-3 and C-4 does not include proposed grading. The "Final Gravel Surfacing Section" on drawing C-8 indicates that 18-inches of processed gravel shall be applied to graveled roads. Proposed contours for the road and associated drainage should be developed
47. Site Access Control is not provided in totality around the perimeter of the Site. What are the proposed controls to prevent unauthorized access and dumping?

Comments Regarding Unresolved Issues from the 30% Re-Submittal Design

30% Re-Submittal Comment 1

The proposed new leaching field is within 20 feet of the north property boundary of the landfill. Does this location conform to setback and buffer agreements? How close is the proposed leach field to adjacent residential drinking wells?

In the 50% Design Submittal, the location of the leaching field remains about 20 feet from the north property line. Responses to the questions above have not been provided. GZA should provide responses.

30% Re-Submittal Comment 2

On a recent site visit to compare the 30% design with the existing conditions of the landfill, a drainage channel was noted along the west slope of the landfill at the grade break between the top 2 percent slope area and the 22-percent side slope. The channel is parabolic-like in shape with a 1.5-foot bottom width and 1 to 2-foot depth. The existing conditions survey does not show this feature. One half of the total length of the channel is on a portion of the landfill where no grading is proposed. What are the plans for this channel? Is it required for stormwater control? Will it be maintained as is, improved, or filled in?

Drawing C-3 of the 50% Design Submittal shows the location of the existing channel and indicates that it is to be "filled and graded into slope". If this channel was not installed as a stormwater control, during initial placement of daily cover over the landfill, then it likely formed as a result of reoccurring erosion over the years. This would indicate that the velocity of stormwater runoff is high enough to become erosive and additional controls or stabilization is likely required. This is an indicator of an ongoing problem that will not be remedied by filling in and grading to match the slope.

30% Re-Submittal Comment 4

The proposed "Limits of Brush Clearing" line indicated on the drawing shows that almost an acre (42,000 square feet) of trees and/or brush are proposed to remain within the limit of the landfill boundary. Any existing cover system in these areas is being penetrated by this woody plant growth. The penetrations promote infiltration through the existing cover soils which contributes to an increase in leachate generation. A recent site visit confirmed that the "brush" is a combination of thick brush cover and trees. Landfill cover systems in compliance with regulatory requirements and generally accepted engineering practice do not allow tree and brush growth on a landfill cover system. While it is desirable to maintain natural buffers at the perimeter of the property, these should not be maintained at the expense of the integrity of the landfill cover system.

The 50% Design Submittal "Limits of Brush Clearing" have remained unchanged from the 30% Re-Submittal. The comment noted above stands. We would add it is somewhat questionable if the clearing limits are accurately shown for the proposed work. Clearing around the new leaching field, the new Water Quality Basin No. 2, the new Detention Pond at the north side of the Transfer Station entrance, the proposed paved storage area, and the outlet associated with New Detention Basin No. 2 should be shown.

30% Re-Submittal Comment 6

From the description of work provided in the GZA letter dated July 8, 2005, it appears that waste excavation is limited to the footprint of the proposed Department of Public Works (DPW) Garage and adjacent parking lot. This implies that a remaining 60-foot strip of waste (4 foot deep?) will be left in place. Why not remove this downgradient most section of waste with the rest? Part of the estimated waste boundary even extends slightly over the west property boundary.

The limit of waste excavation is not clearly indicated on any of the 50% design drawings. It is also unclear from 50% RAWP what waste will be excavated and what waste will be left in place. It is stated that some waste will be removed and some will remain in place. Will waste be left in place beneath the stormwater management system? The drawings should clearly indicate the limit of waste excavation and removal.

30% Re-Submittal Comment 7

The drawings do not identify the limit of proposed waste excavation. Will waste excavation and removal extend to the western limit of the landfill, the limit of the grassed swale, or the limit of the proposed parking lot?

See Comment 6.

30% Re-Submittal Comment 8

Collection of stormwater in subsurface chambers and surface swales should consider the potential for exfiltration into surrounding soils and waste. The chambers, although proposed to be installed in an area where waste has been excavated, are upgradient of waste to remain in place. The capacity of the underground storage system is not stated but is assumed to be large. Measures to ensure containment of the stormwater in the chambers should be provided so that exfiltrated water does not contribute to the generation of leachate downgradient. Similarly, the proposed grassed water quality detention swale will impound water either over waste or directly upgradient of waste. Measures to control exfiltration of detained stormwater from the swale to the underlying waste/soils should be provided.

The 50% Design Submittal depicts a stormwater management system that is different from the 30% Re-Submittal with more accompanying design information. However, the concerns regarding the interaction of stormwater and leachate stand. Without removal of all waste underlying the stormwater management system and all downgradient areas, the potential remains for stormwater water to contact the waste and create additional leachate or for leachate to enter the stormdrain system and become released as surface water. The design does not provide mechanisms to ensure that neither of these scenarios occurs.

30% Re-Submittal Comment 9

It is proposed that compacted clean gravel will be used to fill the area of the site excavated for the purpose of building the DPW Garage and parking lot. This granular fill could serve as a sump that collects upgradient leachate flow. If the leachate level were to mound in this area, it could express

itself as an outbreak. Consider adding piezometers to monitor groundwater/leachate levels adjacent to the downgradient edge of the proposed parking lot.

The 50% Design proposes installation of a low permeable layer (soil or geosynthetic) upgradient of the waste excavation area. This barrier is intended to minimize large scale leachate flow into the clean fill beneath the Department of Public Works (DPW) garage and support structures. However, because of the limited size of the barrier, it is likely that upgradient leachate flow will circumvent the barrier and continue to flow in the general groundwater direction toward the southwest corner of the Site. Detail A on Drawing C-8 depicts the layout of the proposed geosynthetic. Of specific concern is the 6-inch ADS slotted wall drain depicted adjacent to the concrete wall footing. The drainage water collected in this system will be outleted as surface water at the toe of the wall/grade. The barrier does not isolate all flow from the landfill and the potential exists for this drainage system to collect leachate from the landfill and release it as surface water.

30% Re-Submittal Comment 11

Drainage quantity and quality at the intersection of the Transfer Station Road with North Main Road has been a historical problem at the site. Observations have noted water with a visible iron content and sheen ponding along the entrance gate and flowing from the Site across North Main Road toward the wetland along the west side of the road. A significant quantity of flow seems to drain from the Transfer Station along the access road and/or from the adjacent landfill slope to the north. The current design does not seem to adequately address the quantity and quality issues with the addition of only two catchbasins near the entrance. How will the quality of any surface water runoff be treated? Consider intercepting flow from the landfill slope to the north to prevent runoff into the paved areas. Consider installing an inlet pipe from the ditch to the north catchbasin instead of directing channelized flow directly onto the paved access road.

The stormwater management at the facility entrance, of the 50% Design Submittal, has been improved over the 30% Re-Submittal Design in terms of the manner in which it intercepts runoff flows from the entrance road and landfill slopes and diverts it to a detention basin along the north side of the entrance road. However, the grading depicted allows flooding of the entrance road (to elevation 42 feet) prior to conveying flow to the inlet of the 18-inch RCP culvert beneath the entrance road. An outlet device for the Pond should be designed that allows peak flows to be conveyed to the culvert inlet without flooding the road.

30% Re-Submittal Comment 12

It is not clear how the proposed stormwater control and management system will be designed to meet the quality requirements for zinc and lead as required by the Rhode Island Department of Environmental Management (RIDEM) in their comment letter dated July 10, 2002 on the *Jamestown Landfill Site Investigation Report*.

The effectiveness of the stormwater management system to treat zinc and lead relies on the efficiency of the system to remove total suspended solids (TSS) and sediment from the runoff stream. The Site's EMP and/or SWPPP should require continued monitoring for concentrations of lead and zinc in the stormwater long term.

30% Re-Submittal Comment 13

A stormwater analysis comparing pre and post closure peak flows is required to assess the suitability of the proposed stormwater controls. It is assumed that subsequent submittals will include a complete stormwater management plan with supporting calculations.

A "Hydrologic Analysis and Stormwater Detention and Conveyance Design" is included as Appendix C of the 50% *Remedial Action Work Plan*. However, Appendix C was not made available to the public for review through the Town of Jamestown website (www.jamestownri.net). Because Appendix C contains the supporting calculations, a detailed review of these calculations was not performed. We reserve the right to provide additional comment, as appropriate, once Appendix C is made available to the public.

30% Re-Submittal Comment 14

A lining (riprap, erosion control blanket, etc.) for the stormwater controls (diversion swales, grassed water quality detention swale) should be designed to withstand the flow velocity calculated from the stormwater analysis.

The 50% Design Submittal does not contain sufficient detail to evaluate the selection and/or acceptability of the channel linings proposed for the design.

30% Re-Submittal Comment 17

The drawings indicate that only a portion of the landfill within the waste boundary will be graded. This implies that the remaining (left as-is) cover system is of a suitable depth and condition to meet the RIDEM standard for a cover system. We have found no data to support this. In fact we have found the contrary to be true. The test pit logs describe the cover soils as fine to coarse sands that are sometimes mixed with residual waste. No gradation or permeability test data has been made available, but it is unlikely that these classifications of soils meet the standard for a low permeability cover or the RIDEM regulatory requirement of 1×10^{-7} cm/s. GZA responded to this comment in Response #2 of their letter "Response to NECC/MACTEC Presentation" dated July 8, 2005. GZA describes the cover soils based on visual observations of test pit and boring strata and literature-based values for hydraulic conductivity. The conclusion is made that the existing cover soils are sands and silts with a hydraulic conductivity on the order of 1×10^{-6} to 1×10^{-3} cm/s. Without construction certification data showing quality assurance testing, it is only speculation that the existing cover soils meet a low permeability standard. With little protective soil cover over the "low permeability" layer (a minimal depth of topsoil?), the hydraulic conductivity of the soils has most likely decreased over time as the cover has been subjected to several freeze-thaw cycles.

At a minimum, to accept the existing cover material as a suitable low permeability barrier layer, confirmation testing should be completed to verify its gradation and hydraulic conductivity. Shelby tubes should be pushed to collect undisturbed samples at a minimum rate of 2 tests per acre of landfill. Hydraulic conductivity testing of each collected sample should be completed and reported. The test data can then be used to determine the existing cover soils' suitability for incorporation into the proposed closure. If the existing soils do not meet the RIDEM regulatory standard for hydraulic conductivity of 1×10^{-7} cm/s, then, at a minimum, an additional 18-inch layer of low permeability soil meeting the standard should be imported and installed over the landfill. The grading plan should reflect the addition of these cover soils, as required.

The 50% Design Submittal continues to require a landfill cover system soil cap with no permeability standard. Our concerns and comments from the 30% Re-Submittal Design stand.

30% Re-Submittal Comment 18

A Hydrologic Evaluation of Landfill Performance (HELP) model should be completed to predict the estimated leachate generation based on the proposed cover system for the landfill.

No HELP model was included with the 50% Design Submittal. Our comment made during review of the 30% Re-Submittal Design stands.

30% Re-Submittal Comment 19

While RIDEM regulations indicate that a minimum 3% slope is allowable for final grade of the landfill cover, has a settlement assessment been completed to ensure that future settlement will not result in slopes less than 3% in subsequent years during the maintenance and monitoring period?

The 50% Design Submittal does not indicate that any settlement calculations have been performed to substantiate the selection of a 3% sloped final grade. The slope was selected based on the minimum slope allowable by the RIDEM Office of Waste Management *Solid Waste Regulations No. 2*. The Post-Closure Monitoring and Maintenance Plan for the landfill should at least include a monitoring requirement for settlement/subsidence.

30% Re-Submittal Comment 20

No gas venting system for the landfill is proposed. Considering methane concentrations have been measured within the footprint of the landfill, it is prudent to install a passive gas venting system comprised of subsurface collection piping/stone with gas vents at some prescribed frequency depending on the assessment of predicted gas quantities. The closure proposes waste consolidation, grading, and cover soil installation. All these activities can potentially alter existing gas migration pathways. In areas where the cover system soil depth is being increased to 2 feet, additional barrier to gas release will occur. A simple passive gas venting system will provide preferential pathways to release gas and reduce the risk of migration beyond the landfill property or toward the proposed DPW Garage. All landfill closures must provide a mechanism for gas control.

The 50% Design Submittal does not include any gas venting system for the landfill but rather includes a sub-slab venting system to be installed at the proposed DPW garage. The concerns and comments stated during the 30% Re-Submittal Design stand.

30% Re-Submittal Comment 21

What is the plan for decommissioning existing monitoring wells (EA-2S, EA-2D, EA-1B, etc.) within the landfill boundary that are no longer part of the long term monitoring plan? How were the borings abandoned upon completion? These points should be properly abandoned to ensure stormwater infiltration through to the waste does not occur.

It is not clear from the 50% Design Submittal that the decommissioning of wells is included. The comment stands.

Conclusion

As identified above, there are many issues presented by the proposed Jamestown Landfill closure and placement of the PDW Facility on the landfill site. However, there are two primary concerns associated with the closure design and plan for future use. First, we continue to be very concerned about the nature and extent of site investigation that has been undertaken at this site. The hydrogeology is complex (fractured bedrock), the characterization of landfilled-waste has huge data gaps, and the stakes to surrounding landowners are enormous (island community with no back up water supply). To date, there has not been an adequate investigation and characterization of the environmental issues at this site. That lack of a solid site understanding ripples throughout many other aspects of this project (e.g., closure techniques, post-closure monitoring, etc.).

Second, the selection of the proposed cover system and its ability to provide the necessary barrier to stormwater infiltration is insufficient to provide adequate protection to human health and the environment. A low permeability cover system is by far the most standard, reasonable, and economical protection measure available to municipalities in remediating their old abandoned or improperly closed MSW landfills. The goal of this closure should not be limited to preventing direct dermal contact with the waste, as this is basically what is accomplished with a 2-foot soil cap with no permeability or construction quality standards. There is little control over lateral groundwater flow through the Site and its unlined landfill. Groundwater coming in contact with the waste becomes contaminated and migrates off site. The goal of this landfill closure should be to minimize the quantity of contamination with the reduction of landfill leachate generation. Stormwater that is prevented from vertically percolating through the waste, becoming leachate, and mixing with the groundwater regime reduces the risk that contaminant concentrations will be of the magnitude that pose threats to downgradient residential drinking water wells. And as has been seen in many other locations, the consequences of not properly closing old, previously unregulated landfills can be significant.

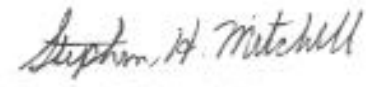
We would be pleased to further discuss these comments with RIDEM. Please contact us if you have any questions.

Sincerely,

MACTEC ENGINEERING AND CONSULTING, INC.


Jeff McCrady
Project Engineer

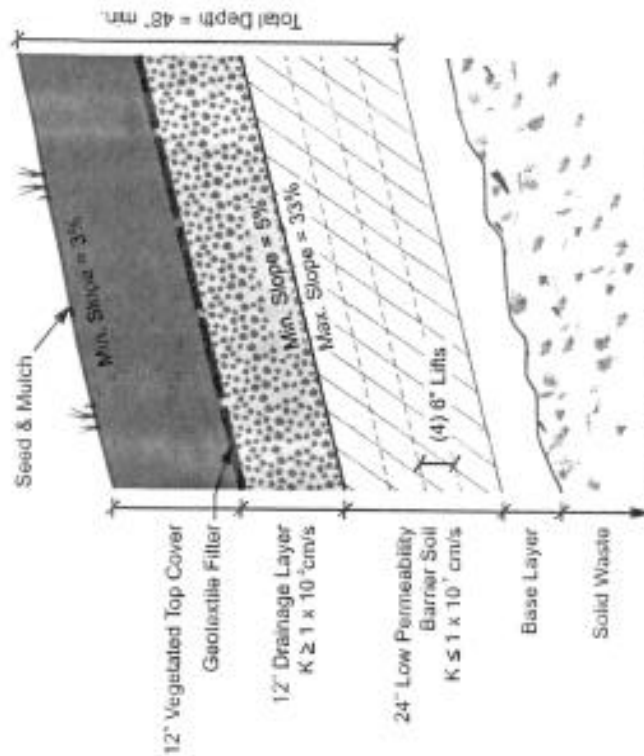
SHM:jpm


Stephen H. Mitchell, P.E.
Principal Engineer

Mr. Chris Walusiak
February 10, 2006

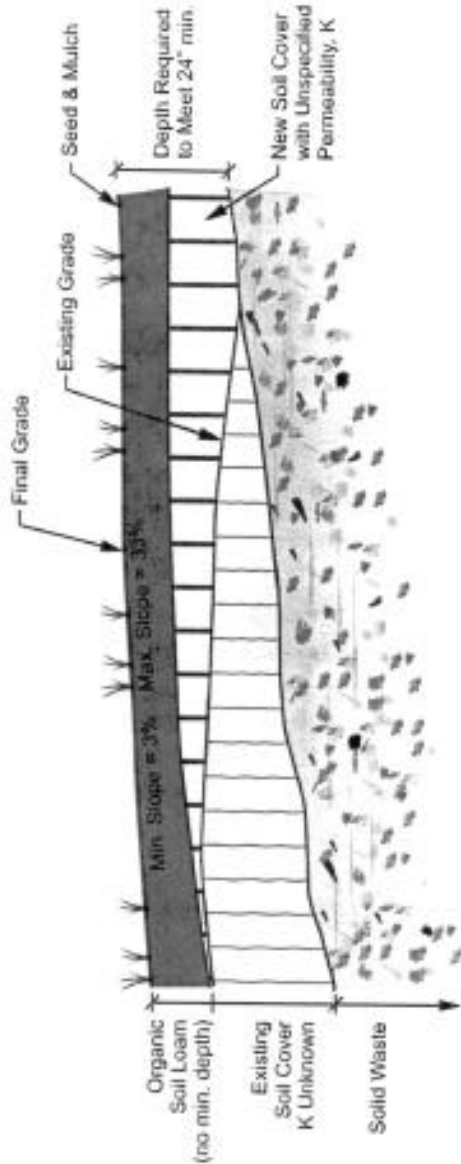
Attachment A

Source: June 8, 2005 Presentation to RIDEM



Note: A 36 mil LLDPE or 60 mil HDPE Geomembrane may be used in place of the Low Permeability Barrier Soil Layer.

RI Solid Waste Regulation Standard Cover System



Proposed Jamestown Landfill Cover System

Attachment B

Source: June 8, 2005 Presentation to RIDEM

RIDEM SWR Closure Standard (1997)	Proposed Closure	Meets Standard?
Cover- bedding layer [RIDEM SWR No. 2, 2.2.12(a)]	Existing soil cover	Yes
Cover- min. 24" low permeability barrier soil or geomembrane [RIDEM SWR No. 2, 2.2.12(b)] $K \leq 1 \times 10^{-7}$ cm/s [RIDEM SWR No. 2.2.06(a)(2)]	Existing soil with added material to equal 24" depth No permeability requirement (K)	No
Cover- min. 12" drainage layer [RIDEM SWR No. 2, 2.2.12(c)]	None	No
Cover- min. 12" vegetated top cover [RIDEM SWR No. 2, 2.2.12(d)]	Undefined depth of inorganic soil	No
Barrier Soil graded slopes- no less than 5%, no greater than 33% [RIDEM SWR No. 2.2.12(b)(1)(iii)]	Soil cover with minimum slope of 3%	No
Provide fences, gates and other security measures to prevent unauthorized access to the site [RIDEM SWR No. 2, 2.1.09(a)(1)]	Fencing and gate provided along North Main Street only	No
RIDEM LCP Standard (2001)	Proposed Closure	Meets Standard?
Without a Certificate of Closure, a landfill must comply with all current statues and regulations [RIDEM LCP Section 4.0]	A soil cover was selected to limit direct exposure or contact with the waste	No
Evaluate possible remedial alternatives for the Site in accordance with SWR No. 2, 2.1.09 which defines the final cover system standard [RIDEM LCP Section 5.0]	Remedial alternatives were selected that did not meet the intent of the SWR	No
Generally Accepted Industry Standard for Landfill Closures	Proposed Closure	Meets Standard?
Provide for gas management to mitigate lateral gas migration	No gas management system proposed	No
Remove woody plant growth from the landfill cover system	Clearing is not proposed within the entire landfill limit	No
Minimize development on top of closed landfills that could cause damage to the integrity of the landfill cover system	Includes a proposed DPW Building, an existing Transfer Station; an expansion of the Composting Yard, and a Material Storage Area within the landfill limit	No
Minimize development within the limits of a closed landfill that could cause risks to human health and safety	Includes enclosed spaces such as the proposed DPW Building, and the existing Transfer Station	No
Provide a vegetative growth layer of adequate depth and make-up to support vegetative growth capable of protecting the cover from erosion	A layer of organic soil/loam of unspecified depth over a fine to course sand soil cover	No
Provide a landfill cover system that reduces leachate generation by minimizing infiltration of stormwater through the waste	The existing soil cover is classified as a fine to course sand which offers little to no reduction in infiltration. The additional soil layer has no permeability requirement.	No

PATRICK K. BOLGER
6 Fore Royal Court
Jamestown, RI 02835

Jamestown 50% Design
Public Comment# 9
Patrick K. Bolger

COPY

February 6, 2006

Mr. Chris Walusiak
Rhode Island Department of Environmental Management
Office of Waste Management
124 Promenade Street
Providence, RI 02908

Subject: Jamestown Landfill Closure

Dear Mr. Walusiak:

With regard to the landfill closure in Jamestown, the plan presented to the public on February 1, 2006, at the town workshop incorporates a significant change to the town's original stated closure plan. This is because the town and it's selected engineering firm, GZA, are now proposing to construct a new Department of Public Works facility, together with parking and materials storage, within the landfill area located on the north end of the island. The location of this facility on a polluted site clearly calls for implementation of an optimal Closure & Remediation Plan to protect the groundwater aquifer which serves Jamestown. The plan presented by GZA on February 1st falls far short of this.

The DEM regulation for groundwater quality defines "sole source aquifer" as an aquifer designated by the USEPA as the sole or principal source of drinking water for the area above the aquifer which is needed to supply 50% or more of the drinking water for that area and for which there are no reasonably available alternative sources should the aquifer become polluted. Clearly Jamestown qualifies for this designation. Currently 55% of Jamestown residents, most living on the north end of the Island, rely on wells for their drinking water supply. The town's own Comprehensive Plan projects that 2 out of 3 new homes in Jamestown will be built on the north end of the island. In addition the town supplements the municipal water supply to the rest of Jamestown with wells which draw from the this same aquifer.

The newly-proposed Closure Plan does not reflect an optimal effort to measure the current state of migration of pollutants from the landfill to all adjacent properties. Yet GZA's own previous study showed contamination of one abutting property, Vierra Farm. More testing is mandatory. The impact of significant equipment and truck traffic on the landfill closure should be thoroughly analyzed as well.

The Work Plan submitted by GZA states: "This Work Plan was designed to provide an appropriate level of remediation given our current understanding of site conditions and proposed development for the property". GZA then takes cover in Appendix "A" - GEOHYDROLOGICAL LIMITATIONS, excerpts of which follow:

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DEM / OWM
FEB 7 2006 11:16

1. *"The conclusions and recommendations submitted in this report are based in part upon the data obtained from a limited number of soil samples from widely spaced subsurface explorations. The nature and extent of variations between these explorations may not become evident until further investigation. If variations or other latent conditions then appear evident, it will be necessary to reevaluate the recommendations of this report."*
4. *"The conclusions and recommendations contained in this report are based in part upon various types of chemical data and are contingent upon their validity. These data have been reviewed and interpretations made in the report. As indicated within the report, some of these data are preliminary "screening" level data, and should be confirmed with quantitative analyses if more specific information is necessary. Moreover, it should be noted that variations in the types and concentrations of contaminants and variations in their flow paths may occur due to seasonal water table fluctuations, past disposal practices, the passage of time, and other factors. Should additional chemical data become available in the future, these data should be reviewed by GZA, and the conclusions and recommendations presented therein modified accordingly."*

The current plan as submitted by GZA appears to recommend the minimum closure requirements for the landfill to lower the cost of constructing a DPW facility for Jamestown, which GZA will also design. This plan does not begin to address the enormous cost to every resident should remediation of contamination to a sole source aquifer become necessary as a result of inadequate landfill closure. I request that DEM demand "Best Management Practices" to insure that the optimal Closure and Remediation Plan for the Jamestown landfill is implemented.

Sincerely,



Patrick K. Bolger

Copy to U.S. Senator Jack Reed
Copy to U.S. Senator Lincoln D. Chafee
Copy to U.S. Representative Patrick J. Kennedy
Copy to Governor Donald L. Carcieri
Copy to Lieutenant Governor Charles J. Fogarty
Copy to Attorney General Patrick C. Lunch
Copy to State Senate Majority Leader M. Teresa Paiva-Weed
Copy to State Representative Bruce J. Long
Copy to W. Michael Sullivan, Director RIDEM
Copy to Angelo S. Liberti, Chief, Surface Water Protection DEM
Copy to Jay Manning, Division of Water Resources DEM
Copy to Dr. David R. Gifford, Director, RIDOH
Copy to Dr. Robert Vanderslice, Chief, Risk Assessment, Environmental Health, RIDOH
Copy to Bruce Keiser, Town Administrator, Town of Jamestown

STATE OF RHODE ISLAND AND PROVIDENCE
DEPARTMENT OF HEALTH



Jamestown 50% Design
Public Comment# 10
Richard L. Amirault

Safe and Healthy Lives in Safe and Healthy Communities

February 8, 2006

Mr. Chris Walusiak
RIDEM- Office of Waste Management
235 Promenade Street
Providence, RI 02908

RE: Jamestown Landfill 50% Design Public Comments

Dear Mr. Walusiak,

I am writing you today to make comment regarding the above referenced project. I was in attendance at the evening meeting at the Jamestown Library on February 01, 2006.

Many of the concerns raised by the Jamestown residents related to the potential for adverse impacts to their drinking water quality, derived from privately owned wells.

I suggest the development of a contingency plan that would address the circumstance of private well contamination resulting from implementation of the landfill closure project. Perhaps the Town of Jamestown could develop the contingency plan and incorporate it into the Landfill Investigation/Remediation Process.

If you have any questions regarding this comment letter, please feel free to contact me at your convenience. I can be reached at the Office of Drinking Water Quality at 222-7762.

Respectfully,

Richard L. Amirault
Engineering Technician IV

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D.E.W. 7 JAN 14

2006 FEB -03 PM 10:25

23 Skysail Court
Jamestown, RI 02835
5 February 2006

Mr. Chris Walusiak
Rhode Island Department of Environmental Management

Dear Mr. Walusiak,

With regards to the Jamestown Landfill 50% Design Public Comment time period, I have several comments and questions.

In 1988 the Jamestown Town Council passed an emergency ordinance that stopped any residential development within 1,000 feet of the perimeter of the Jamestown landfill. In their resolution, the Jamestown Town Council made two very significant statements in explaining their reasons for the order. The first statement was "The use of the aforesaid property as a landfill commenced in or about 1948 and terminated in 1986; and WHEREAS, there was little or no regulation and or control regarding the quantity or type of materials deposited at the aforesaid site during its operation as a landfill..." The second statement was "Whereas, the Board of Water and Sewer Commissioners of the Town of Jamestown has no plans nor the capacity to extend the municipal water system..." With these two significant admissions, what has changed to diminish these reasons?

In or around 1987, the developers of the Vieira Farm property were required to install a cluster of 6 test wells, ranging from 70 to 100 feet deep, in a 1 one acre field just south of the landfill. The wells turned up contaminated and the Vieira Farm development was stopped. Again in 1992, contaminants were found in those wells when GZA was hired by the Davisville Credit Union to make a determination of the source of contaminants. GZA's conclusion was that "the former Jamestown Landfill, which abuts the site to the northwest, is the source of the observed VOC contamination."

Today, GZA is working for the Jamestown as the engineers for remediation and the new DPW garage and the GZA plan is based in part on 6 somewhat shallow test wells scattered around the ¾ mile perimeter of the 12-14 acre landfill. Since the cluster method of deep wells in a concentrated area used on the Vieira Farm property apparently is the most effective way to find evidence of contaminants, why isn't this method used again? Why aren't the Vieira Farm's wells tested again, since they are owned by the citizen supported Land Trust and are still intact and easily accessible?

The number of Jamestown Landfill monitoring wells tested in March 2005 decreased from 13 to 6. Why the decrease in the number of test wells?

Well EA-1B, which along with GZ-2, is the most down-gradient well on the landfill property. It is also the well that has had consistent hits of both Volatile Organic Compounds (VOCs) as well as metals for the entire period since installation of the well -

perhaps more so than any other well. In addition, as recently as September 2004, the Federal MCL for antimony was exceeded. Yet, testing of this well was discontinued starting in December of 2004, a mere three months after a drinking water standard was exceeded.

The so-called "deep well" has routinely shown hits of metals with the MCL for copper also being exceeded as recently September 2004. Testing of this well was discontinued starting in December of 2004, a mere three months after a drinking water standard was exceeded.

There is insufficient well monitoring. With regard to the issue of intermittent detections associated with the contaminants (both VOCs and metals), the important point is there were detections in the last eight quarters (as of August 2005) of monitoring of eight (8) different volatile organics over that two year period as well as twelve (12) different metals. Regarding the intermittent nature of the detections, the sampling was done at various times of the year with different hydrology present at each sampling round. Fluctuation in sampling results is entirely consistent with the hydrogeology of this area. Why are there no well pairs to determine vertical gradients? Why is there no pump testing? Why are there no cluster wells? Why aren't all wells tested more frequently?

All GZA reports are filled with disclaimers. Why has there been no hydrogeology study performed on the island?

How many violations of DEM and EPA regulations have Jamestown received in the past 15 years? How can we be assured that the integrity of the remediation safeguards will be maintained?

The EPA is the governing agency over the DEM and the Town of Jamestown. All regulations of the EPA should be enforced. Where is the citizens' group to oversee the proper closure of the Jamestown landfill?

To treat stormwater quality on site, several water quality basins and detention basins have been proposed. Of particular concern are Water Quality Basin No. 2 and Detention Basin No. 2, both of which rely on infiltration of the stormwater to provide treatment and improve runoff quality. One basin infiltrates surface water just upgradient of the landfill waste boundary and the other infiltrates within the landfill waste boundary. In effect, this surface water is being introduced as groundwater. This surface water will then flow through the waste of the landfill and become leachate.

Isn't it true that this proposed stormwater control system will have the net effect of increasing leachate production at the landfill?

Given that minimization of leachate production should be the primary goal of a landfill closure, why is this design acceptable, especially in light of the fact that the cover system being proposed is not an impermeable cover?

The current site is an operating Transfer Station, which by function is classified as an industrial site. As a result of the Site's use, there have been measured surface water contaminants that are at risk for migrating off site. By constructing a Department of Public Works (DPW) Facility at this same location, the industrial activity at the Site will increase the potential for polluting surface water runoff from the Site. It is proposed that a majority of stormwater runoff from areas of industrial activity (the Metals Recycling Area, the Yard Waste and Compost Area, the Transfer Station, and the DPW Garage) on the Site flow toward the wetland on the west side of North Main Road. The current 50% design plan calls for discharge of stormwater from this industrial site onto an abutter's property and into GA wetlands.

How do you plan to monitor those wetlands and the wells which they recharge?

Storm water will run off the Jamestown Landfill into wetlands west of North Main Road and ultimately into a stream which empties through a salt water marsh and into Narragansett Bay. Will a permit from the Coastal Resource Management Council to run storm water from a contaminated landfill into the Bay be required by the Jamestown?

The Jamestown Landfill is perhaps the most toxic piece of property on Jamestown. Could you think of a place in Jamestown where you could endanger as many people if toxins were released from this landfill?

Do you know of any other landfill that has had an industrial facility built on it that: a) is sitting on a highly fractured bedrock aquifer; b) is surrounded by private wells; and c) where there is no possibility of another source of drinking water?

The Vieira Farm wells were polluted in 1987 and for years thereafter. This is after trash was moved to build the transfer station on the Jamestown Landfill. Will this occur for other abutters when the highway garage is built on the Jamestown Landfill?

If my well becomes contaminated following construction at the Jamestown Landfill, what will you do?

The proposed cover system design requires only a 24-inch soil cap. In the 30% design submittal we questioned the selection of a soil cap without a permeability requirement. The minimum RI standard for municipal solid waste landfill closures requires a low permeable cover. The simplest and most cost effective way to provide long-term protection of our drinking water wells is to provide a low permeable landfill cover.

Why isn't the minimum state standard for closing a landfill being met for the Jamestown Landfill?

Can the 50% design manage stormwater appropriately, and in compliance with the stormwater regulations, while still including a town garage on the site with a low permeability cover?

The current 50% design does not require paving of several roadways across the surface of the landfill. RIDEM specifically required paving of all roadways on the landfill in its comments on the 30% design.

Why has GZA ignored DEM's requirement to pave all areas which will encounter vehicular traffic?

The regular heavy truck traffic that these roads will receive during all types of weather conditions has the potential to damage the gravel surface. How will the underlying soil cap of the landfill be protected if it's not paved?

The landfill is producing methane. Tests within the footprint of the landfill have measured concentrations of methane. The potential for gas migration beyond the footprint of the landfill remains increased unless a mechanism for methane release is installed. Why isn't a gas venting system being provided in the closure design to mitigate this risk?

The 50% Work Plan indicates that the proposed Department of Public Works Facility will be used for vehicle and equipment storage and maintenance. Buildings of this type have floor drains that must outlet somewhere. How will the discharges from these drains be treated so that they are not point sources of pollution?

The RI regulations indicate that fracture trace analysis and tracer studies of potential flow pathways for groundwater and potential contaminant transfer may be required. We believe a site as sensitive as the Jamestown Landfill be required to have tracer studies completed. Is GZA planning to do such analyses? How will the proposed changes of land use at the site with new buildings, pavement, and subsurface structures affect groundwater flow pathways? When the landfill is appropriately capped, what follow-up will be done with regard to investigation of the alteration of groundwater flow pathways?

RI regulations require that monitoring wells be installed at appropriate locations / depths to yield groundwater samples from the upper most aquifer. To date, no monitoring wells are installed in the overburden across the upper most aquifer. Wells are installed in the bedrock at least 13 feet below the water table and at one key location (GZ-7), a well is installed approximately 100 feet below the water table surface.

A more robust monitoring well network should be required for this sensitive site. Will there be any more monitoring wells installed? If so, where will they be, how deep will they be, and at what depths will they be screened?

How will the shallow aquifer be monitored to detect any releases before it gets down into the bedrock, at which point it becomes a greater threat to neighboring potable water supplies?

RI regulations require that horizontal spacing of monitoring wells must be based upon site-specific conditions including presence of sensitive environments and groundwater users. The proposed monitoring network includes wells located along the down-gradient boundary of the landfill that are spaced 250-300 feet apart. This is a sensitive environment with a jurisdictional wetland immediately adjacent to the landfill, surrounded by private wells.

Is GZA going to install additional monitoring wells, as required by RI regulations, for sensitive environments with an inferior cover system?

The groundwater immediately under the landfill was very recently reclassified as GB (meaning it is not suitable for drinking), while the groundwater immediately adjacent to the landfill is GA (meaning it is drinkable). This reclassification was done well after the Site Investigation Report was completed and a groundwater monitoring plan proposed.

How will monitoring of the GB / GA classified areas be carried out?

What will be the requirement to ensure that there are no exceedences of standards in the groundwater downgradient of the landfill that is classified as GA?

Will there be monitoring wells placed in both the GB and GA groundwater areas to ensure that any trends in the GB are detected before the GA water is adversely impacted?

The existing groundwater monitoring plan was developed years before the 50% design plan, which now includes a highway garage and a dramatically revised landfill closure plan.

Will GZA now develop a groundwater monitoring plan that reflects the new actual situation?

RIDEM regulations require at least 30 years of groundwater monitoring at sites like this. Given the dramatically different project now being proposed here, and the fact that this area is not served by public water, is GZA going to propose the minimum 30 years of groundwater monitoring?

Photoionization Detectors or PIDs can detect hundreds of volatile organic compounds but no semi volatile organic compounds and no hazardous metals. Although the closed landfill in Jamestown has had exceedances of volatile organic compounds, most of the exceedances have shown to be semi volatile organic compounds and

hazardous metals. Therefore, photoionization detection as a method to screen the excavated waste and reuse the soil is not a reliable method.

Do you agree with this statement and should more stringent testing be conducted on the screened waste before using it as a cap or fill?

The sift and screen process proposed in the Jamestown Landfill 50% Design Plan for soil is insufficient. Why is only 1 sample per 500 cubic yards tested? What tests will be performed on each sample? Are these sufficient?

GZA found many contaminants and known carcinogens above safe drinking water standards and reported them in March 2002 in the SITE INVESTIGATION REPORT, prepared by GZA for the Town of Jamestown, March 2002. For example BIS(2-ethylhexyl)phthalate was reported at a level of 11 which has a maximum contaminant level (MCL) of 6.

In the GZA Letter to DEM, File No. 32220.00 dated July 8, 2005, GZA said there were no contaminants found in groundwater at the landfill since 1984.

Why the discrepancies and what should we believe?

In August 1992, GZA prepared a report for the Davisville Credit Union (Geohydrologic Study, Vieira Farm Property, Jamestown, RI, File No. 31018) in which GZA stated that the Vieira Farm's wells were downgradient from the landfill.

In the GZA Letter to DEM, File No. 32220.00 dated July 8, 2005, GZA said the Vieira Farm's wells are not downgradient from the landfill.

Why the discrepancies and what should we believe?

In August 1992, GZA prepared a report for the Davisville Credit Union (Geohydrologic Study, Vieira Farm Property, Jamestown, RI, File No. 31018) in which GZA stated that contamination, and in particular VOCs, found in Vieira Farm wells were from the Jamestown landfill.

In the GZA Letter to DEM, File No. 32220.00 dated July 8, 2005, GZA said the well contamination on the Vieira Farm is due to waste disposal on that property.

Why the discrepancies and what should we believe?

In the GZA Transaction Screen Report, Plat 2, Lot 47, prepared for the Town of Jamestown, File No. 32220.5, dated December 13, 1999, GZA stated that a well on Lot 47 *would affect* groundwater migration patterns. GZA also stated that they cannot be certain that pumping will not derive flow from beneath the landfill now or at some time in the future.

In the GZA Letter to DEM, File No. 32220.00 dated July 8, 2005, GZA said that a well on Lot 47 will be used for water and that it *will not impact* groundwater flow. In both instances the Town of Jamestown was the client of GZA.

Why the discrepancies and what should we believe?

Will groundwater be affected or not?

What extensive tests have been done on Lot 47 wells?

In the GZA Letter to DEM, File No. 32220.00 dated July 8, 2005, GZA said that treated waste water treatment plant sludge was accepted in an approximately one acre area on the southeastern portion of the parcel until 1985.

Sludge was disposed of at the landfill until 1999. It was mixed with compost and spread around. In a 1991 report entitled "Final Report, Screening Site Inspection For The Jamestown Landfill, CERCLIS NO. RID982543378", EA Engineering, Science & Technology, Walpole, MA. it is clear that there was sewage being transported onto the island for treatment and disposal. Further, as indicated in a February 4, 1999 letter from RIDEM (Letter from Warren M. Towne, P.E. (RIDEM) to Steven J. Goslee (Public Works Director, Town of Jamestown)), sludge composting was still taking place at the landfill and that such activities had created concerns for RI DEM based upon inspections that had taken place at that time.

Why the discrepancies and what should we believe?

All GZA reports are filled with disclaimers. What should we believe in any of their reports?

I believe that GZA should be removed from the closure proceedings of the Jamestown Landfill due to the firm's long term relationship with the town and the firm's insider information / dealings. I recommend that another firm, e.g., the engineering firm that closed the Block Island landfill (also on an island with a sole source aquifer) be hired to close the Jamestown landfill. The importance of closing the Jamestown landfill properly cannot be stressed enough. The highway barn issue on Jamestown should be treated separately. This issue is about public health and safety and the protection of our water!

Please send responses to the above address.

Sincerely,
Rosemary Woodside
Rosemary Woodside

Louise Brendlinger

178 West Reach Drive, Jamestown, RI 02835
Tel 401 423 2774 email louisebrendlinger@cox.net

Mr. Chris Walusiak
Rhode Island Department of Environmental Management

Dear Mr. Walusiak,

With regards to the Jamestown Landfill 50% Design Public Comment time period, I have several comments and questions.

In 1988 the Jamestown Town Council passed an emergency ordinance that stopped any residential development within 1,000 feet of the perimeter of the Jamestown landfill. In their resolution, the Jamestown Town Council made two very significant statements in explaining their reasons for the order. The first statement was "The use of the aforesaid property as a landfill commenced in or about 1948 and terminated in 1986; and WHEREAS, there was little or no regulation and or control regarding the quantity or type of materials deposited at the aforesaid site during its operation as a landfill..." The second statement was "Whereas, the Board of Water and Sewer Commissioners of the Town of Jamestown has no plans nor the capacity to extend the municipal water system..." With these two significant admissions, what has changed to diminish these reasons?

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Today, GZA is working for the Jamestown as the engineers for remediation and the new DPW garage and the GZA plan is based in part on 6 somewhat shallow test wells scattered around the ¼ mile perimeter of the 12-14 acre landfill. Since the cluster method of deep wells in a concentrated area used on the Vieira Farm property apparently is the most effective way to find evidence of contaminants, why isn't this method used again? Why aren't the Vieira Farm's wells tested again, since they are owned by the citizen supported Land Trust and are still intact and easily accessible?

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All GZA reports are filled with disclaimers. Why has there been no hydrogeology study performed on the island?

How many violations of DEM and EPA regulations have Jamestown received in the past 15 years? How can we be assured that the integrity of the remediation safeguards will be maintained?

The EPA is the governing agency over the DEM and the Town of Jamestown. All regulations of the EPA should be enforced. Where is the citizens' group to oversee the proper closure of the Jamestown landfill?

To treat stormwater quality on site, several water quality basins and detention basins have been proposed. Of particular concern are Water Quality Basin No. 2 and Detention Basin No. 2, both of which rely on infiltration of the stormwater to provide treatment and improve runoff quality. One basin infiltrates surface water just upgradient of the landfill waste boundary and the other infiltrates within the landfill waste boundary. In effect, this surface water is being introduced as groundwater. This surface water will then flow through the waste of the landfill and become leachate.

Isn't it true that this proposed stormwater control system will have the net effect of increasing leachate production at the landfill?

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Is GZA going to install additional monitoring wells, as required by RI regulations, for sensitive environments with an inferior cover system?

The groundwater immediately under the landfill was very recently reclassified as GB (meaning it is not suitable for drinking), while the groundwater immediately adjacent to the landfill is GA (meaning it is drinkable). This reclassification was done well after the Site Investigation Report was completed and a groundwater monitoring plan proposed.

How will monitoring of the GB / GA classified areas be carried out?

What will be the requirement to ensure that there are no exceedences of standards in the groundwater downgradient of the landfill that is classified as GA?

Will there be monitoring wells placed in both the GB and GA groundwater areas to ensure that any trends in the GB are detected before the GA water is adversely impacted?

The existing groundwater monitoring plan was developed years before the 50% design plan, which now includes a highway garage and a dramatically revised landfill closure plan.

Will GZA now develop a groundwater monitoring plan that reflects the new actual situation?

RIDEM regulations require at least 30 years of groundwater monitoring at sites like this. Given the dramatically different project now being proposed here, and the fact that this area is not served by public water, is GZA going to propose the minimum 30 years of groundwater monitoring?

Photoionization Detectors or PIDs can detect hundreds of volatile organic compounds but no semi volatile organic compounds and no hazardous metals. Although the closed landfill in Jamestown has had exceedances of volatile organic compounds, most of the exceedances have shown to be semi volatile organic compounds and

Given that minimization of leachate production should be the primary goal of a landfill closure, why is this design acceptable, especially in light of the fact that the cover system being proposed is not an impermeable cover?

The current site is an operating Transfer Station, which by function is classified as an industrial site. As a result of the Site's use, there have been measured surface water contaminants that are at risk for migrating off site. By constructing a Department of Public Works (DPW) Facility at this same location, the industrial activity at the Site will increase the potential for polluting surface water runoff from the Site. It is proposed that a majority of stormwater runoff from areas of industrial activity (the Metals Recycling Area, the Yard Waste and Compost Area, the Transfer Station, and the DPW Garage) on the Site flow toward the wetland on the west side of North Main Road. The current 50% design plan calls for discharge of stormwater from this industrial site onto an abutter's property and into GA wetlands.

How do you plan to monitor those wetlands and the wells which they recharge?

Storm water will run off the Jamestown Landfill into wetlands west of North Main Road and ultimately into a stream which empties through a salt water marsh and into Narragansett Bay. Will a permit from the Coastal Resource Management Council to run storm water from a contaminated landfill into the Bay be required by the Jamestown?

The Jamestown Landfill is perhaps the most toxic piece of property on Jamestown. Could you think of a place in Jamestown where you could endanger as many people if toxins were released from this landfill?

Do you know of any other landfill that has had an industrial facility built on it that: a) is sitting on a highly fractured bedrock aquifer; b) is surrounded by private wells; and c) where there is no possibility of another source of drinking water?

The Vieira Farm wells were polluted in 1987 and for years thereafter. This is after trash was moved to build the transfer station on the Jamestown Landfill. Will this occur for other abutters when the highway garage is built on the Jamestown Landfill?

If my well becomes contaminated following construction at the Jamestown Landfill, what will you do?

The proposed cover system design requires only a 24-inch soil cap. In the 30% design submittal we questioned the selection of a soil cap without a permeability requirement. The minimum RI standard for municipal solid waste landfill closures requires a low permeable cover. The simplest and most cost effective way to provide long-term protection of our drinking water wells is to provide a low permeable landfill cover.

Why isn't the minimum state standard for closing a landfill being met for the Jamestown Landfill?

Can the 50% design manage stormwater appropriately, and in compliance with the stormwater regulations, while still including a town garage on the site with a low permeability cover?

The current 50% design does not require paving of several roadways across the surface of the landfill. RIDEM specifically required paving of all roadways on the landfill in its comments on the 30% design.

Why has GZA ignored DEM's requirement to pave all areas which will encounter vehicular traffic?

The regular heavy truck traffic that these roads will receive during all types of weather conditions has the potential to damage the gravel surface. How will the underlying soil cap of the landfill be protected if it's not paved?

The landfill is producing methane. Tests within the footprint of the landfill have measured concentrations of methane. The potential for gas migration beyond the footprint of the landfill remains increased unless a mechanism for methane release is installed. Why isn't a gas venting system being provided in the closure design to mitigate this risk?

The 50% Work Plan indicates that the proposed Department of Public Works Facility will be used for vehicle and equipment storage and maintenance. Buildings of this type have floor drains that must outlet somewhere. How will the discharges from these drains be treated so that they are not point sources of pollution?

The RI regulations indicate that fracture trace analysis and tracer studies of potential flow pathways for groundwater and potential contaminant transfer may be required. We believe a site as sensitive as the Jamestown Landfill be required to have tracer studies completed. Is GZA planning to do such analyses? How will the proposed changes of land use at the site with new buildings, pavement, and subsurface structures affect groundwater flow pathways? When the landfill is appropriately capped, what follow-up will be done with regard to investigation of the alteration of groundwater flow pathways?

RI regulations require that monitoring wells be installed at appropriate locations / depths to yield groundwater samples from the upper most aquifer. To date, no monitoring wells are installed in the overburden across the upper most aquifer. Wells are installed in the bedrock at least 13 feet below the water table and at one key location (GZ-7), a well is installed approximately 100 feet below the water table surface.

A more robust monitoring well network should be required for this sensitive site. Will there be any more monitoring wells installed? If so, where will they be, how deep will they be, and at what depths will they be screened?

How will the shallow aquifer be monitored to detect any releases before it gets down into the bedrock, at which point it becomes a greater threat to neighboring potable water supplies?

RI regulations require that horizontal spacing of monitoring wells must be based upon site-specific conditions including presence of sensitive environments and groundwater users. The proposed monitoring network includes wells located along the down-gradient boundary of the landfill that are spaced 250-300 feet apart. This is a sensitive environment with a jurisdictional wetland immediately adjacent to the landfill, surrounded by private wells.

Is GZA going to install additional monitoring wells, as required by RI regulations, for sensitive environments with an inferior cover system?

The groundwater immediately under the landfill was very recently reclassified as GB (meaning it is not suitable for drinking), while the groundwater immediately adjacent to the landfill is GA (meaning it is drinkable). This reclassification was done well after the Site Investigation Report was completed and a groundwater monitoring plan proposed.

How will monitoring of the GB / GA classified areas be carried out?

What will be the requirement to ensure that there are no exceedences of standards in the groundwater downgradient of the landfill that is classified as GA?

Will there be monitoring wells placed in both the GB and GA groundwater areas to ensure that any trends in the GB are detected before the GA water is adversely impacted?

The existing groundwater monitoring plan was developed years before the 50% design plan, which now includes a highway garage and a dramatically revised landfill closure plan.

Will GZA now develop a groundwater monitoring plan that reflects the new actual situation?

RIDEM regulations require at least 30 years of groundwater monitoring at sites like this. Given the dramatically different project now being proposed here, and the fact that this area is not served by public water, is GZA going to propose the minimum 30 years of groundwater monitoring?

Photoionization Detectors or PIDs can detect hundreds of volatile organic compounds but no semi volatile organic compounds and no hazardous metals. Although the closed landfill in Jamestown has had exceedances of volatile organic compounds, most of the exceedances have shown to be semi volatile organic compounds and

hazardous metals. Therefore, photoionization detection as a method to screen the excavated waste and reuse the soil is not a reliable method.

Do you agree with this statement and should more stringent testing be conducted on the screened waste before using it as a cap or fill?

The sift and screen process proposed in the Jamestown Landfill 50% Design Plan for soil is insufficient. Why is only 1 sample per 500 cubic yards tested? What tests will be performed on each sample? Are these sufficient?

GZA found many contaminants and known carcinogens above safe drinking water standards and reported them in March 2002 in the SITE INVESTIGATION REPORT, prepared by GZA for the Town of Jamestown, March 2002. For example BIS(2-ethylhexyl)phthalate was reported at a level of 11 which has a maximum contaminant level (MCL) of 6.

In the GZA Letter to DEM, File No. 32220.00 dated July 8, 2005, GZA said there were no contaminants found in groundwater at the landfill since 1984.

Why the discrepancies and what should we believe?

In August 1992, GZA prepared a report for the Davisville Credit Union (Geohydrologic Study, Vieira Farm Property, Jamestown, RI, File No. 31018) in which GZA stated that the Vieira Farm's wells were downgradient from the landfill.

In the GZA Letter to DEM, File No. 32220.00 dated July 8, 2005, GZA said the Vieira Farm's wells are not downgradient from the landfill.

Why the discrepancies and what should we believe?

In August 1992, GZA prepared a report for the Davisville Credit Union (Geohydrologic Study, Vieira Farm Property, Jamestown, RI, File No. 31018) in which GZA stated that contamination, and in particular VOCs, found in Vieira Farm wells were from the Jamestown landfill.

In the GZA Letter to DEM, File No. 32220.00 dated July 8, 2005, GZA said the well contamination on the Vieira Farm is due to waste disposal on that property.

Why the discrepancies and what should we believe?

In the GZA Transaction Screen Report, Plat 2, Lot 47, prepared for the Town of Jamestown, File No. 32220.5, dated December 13, 1999, GZA stated that a well on Lot 47 *would affect* groundwater migration patterns. GZA also stated that they cannot be certain that pumping will not derive flow from beneath the landfill now or at some time in the future.

In the GZA Letter to DEM, File No. 32220.00 dated July 8, 2005, GZA said that a well on Lot 47 will be used for water and that it *will not impact* groundwater flow. In both instances the Town of Jamestown was the client of GZA.

Why the discrepancies and what should we believe?

Will groundwater be affected or not?

What extensive tests have been done on Lot 47 wells?

In the GZA Letter to DEM, File No. 32220.00 dated July 8, 2005, GZA said that treated waste water treatment plant sludge was accepted in an approximately one acre area on the southeastern portion of the parcel until 1985.

Sludge was disposed of at the landfill until 1999. It was mixed with compost and spread around. In a 1991 report entitled "Final Report, Screening Site Inspection For The Jamestown Landfill, CERCLIS NO. RID982543378", EA Engineering, Science & Technology, Walpole, MA. it is clear that there was sewage being transported onto the island for treatment and disposal. Further, as indicated in a February 4, 1999 letter from RIDEM (Letter from Warren M. Towne, P.E. (RIDEM) to Steven J. Goslee (Public Works Director, Town of Jamestown)), sludge composting was still taking place at the landfill and that such activities had created concerns for RI DEM based upon inspections that had taken place at that time.

Why the discrepancies and what should we believe?

All GZA reports are filled with disclaimers. What should we believe in any of their reports?

I believe that GZA should be removed from the closure proceedings of the Jamestown Landfill due to the firm's long term relationship with the town and the firm's insider information / dealings. I recommend that another firm, e.g., the engineering firm that closed the Block Island landfill (also on an island with a sole source aquifer) be hired to close the Jamestown landfill. The importance of closing the Jamestown landfill properly cannot be stressed enough. The highway barn issue on Jamestown should be treated separately. This issue is about public health and safety and the protection of our water!

Please send responses to the above address.

Sincerely,

Louise Brendlinger

P.S.

All though this letter is prepared
we do not want to risk our water supply.

February 9, 2006

RECI
D.E.M. J. Nicoletta

Mr. Chris Walusiak
Rhode Island Department of Environmental Management
Office of Waste Management
235 Promenade Street
Providence, RI 02908

2006 FEB 10 P 12: 59

Dear Mr. Walusiak,

I live on 2 Prospect Avenue in Jamestown. My land abuts Lot 47, which is the Eastern border of the former Jamestown Landfill. The GZA GeoEnvironmental, Inc. has submitted a Remedial Action Work Plan and 50% design for the town of Jamestown for the purpose of closing the landfill, and construction a town Highway Barn.

I have a three year old daughter Mr. Walusiak, and as any parent, my greatest concern is the safety and well-being of my daughter. She drinks the water from my well, bathes in the water, our clothes are washed in the water. Our plants and lawn, and the several trees I have planted are fed by this water. Water is the lifeblood of our species, and all species. I believe the safety of my daughter, and myself, and the many children and families in the vicinity is greatly threatened by this GZA proposal to the town of Jamestown. Acceptance of this plan, inadequate closure of the landfill, and the creation of a large municipal building would greatly threaten my well, and those of our neighbors; and in time I believe the water of the entire island of Jamestown.

I am not a scientist, and don't claim to be, but I listen to the facts. The facts are this. Jamestown should be viewed as a sole source aquifer. It is a small island, with no water being fed underground through the mainland. This means that once this water that is under the ground is contaminated, it is NOT going to be filtered by anything other than rainwater.

In addition, the bedrock that this water is stored in is fractured. This means that we have potentially a large lake beneath the ground. *There is no containment under the ground of Jamestown for contaminated water due to the fractured bedrock.* Polluted water can move and drift without bounds, and eventually, if it is contaminated, hundreds of wells can be polluted. This could cause disastrous health, financial, and legal problems for the residents of the town of Jamestown.


This waste in the former landfill is a designated toxic waste site. Wells in Vierra Farm and the Landfill have come up dirty with contaminants. The cycle of testing the water by the GZA is inconsistent, and there is a precedent of ignoring wells that test dirty.

The water for the Highway barn is meant to drain on Lot 47, less than fifty feet from my well. The GZA has proposed inadequate means for containment of rainwater runoff at the proposed highway barn. This could mean the polluted water is being dumped onto Lot 47. In addition, Lot 47's well was originally deemed non potable. The GZA deemed

that if less than 200 gallons of water/day is taken from this well, then it would 'most likely' not draw from under the landfill. The maintenance of a large building, including the trucks, and showers for town workers, on a limit of under 200 gallons a day is preposterous. Yet, no measure has been put in place to measure the usage at this well.

Please consider the health of my daughter, the surrounding families, and the town of Jamestown. Let's not allow a disaster to happen. Please.

Sincerely,



Andrew Justin Nicoletta

Cc:

Senator Jack Reed

Senator Lincoln D. Chafee

Representative Patrick J. Kennedy

Governor Donald L. Carcieri

Lieutenant Governor Charles J. Fogarty

Attorney General Patrick C. Lynch

State Senate Majority Leader M. Teresa Paiva-Weed

State Representative Bruce J. Long

W. Michael Sullivan, Director, RIDEM

Angelo S. Liberti, Chief, Surface Water Protection, RIDEM

Jay Manning, Principal Engineer, Division of Water Resources, RIDEM

David R. Gifford, M.D., MPH, Director, Rhode Island Department of Health

Robert Vanderslice, PhD, Chief, Risk Assessment, Environmental Health, RI Department of Health

David B. Van Slyke, Preti Flaherty LLP

Andrew Yates
52 Mount Hope Avenue
Jamestown, RI 02835-1470

February 9, 2006

2006 FEB 10 A 9:10

Mr. Chris Walusiak
RIDEM, Waste Management Office
235 Promenade St.
Providence, RI 02908

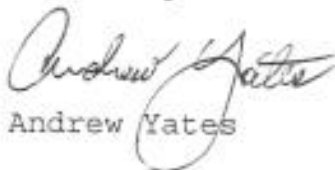
Dear Mr. Walusiak,

I am very concerned by a few north-enders that want to buck the facts and the overwhelming will of the Town. Please do not let the fear and smear tactics of these people distract you from the science and public service at stake. The Highway Barn design and operation is being held to the highest standards, in part under your control, to assure that it does not itself become a source of contamination. The ongoing process of closing the landfill will reduce the water safety risks, and introducing the Highway Barn can only speed up the process.

I would add that suitable sites on North Road are precious few. At the end of the day, when the Highway Barn opens, this fact will become the salient one. North Road is the only arterial spine on the island. ONLY North Road provides direct access to nearly every subdivision and neighborhood. Over the years, other sites have been considered and each was found to put sensitive areas at risk and to lack access even to abutting neighborhoods.

The "you can't get there from here" challenge is very real and threatens both operations and the environment. With no other arterial site to consider, this site is too good to pass up.

Sincerely,


Andrew Yates

Anthony N. Lush
17 Bay Street
Jamestown, RI 02835

February 9, 2006

Mr. Chris Walusiak
Rhode Island Department of Environmental Management
Office of Waste Management
235 Promenade Street
Providence, RI 02908

Dear Mr. Walusiak:

I write you regarding the proposed Jamestown landfill remediation project presented at the February 1st workshop.

I am very much in favor of the proposed Jamestown landfill remediation project which efficiently reuses the landfill for the highway garage and related facilities. That seems to me to be the best way to solve several issues at once.

I hope your office can resist the well-funded political pressure opposing the project, and will base its decision on good engineering and science.

Most Jamestown residents want to see the highway garage built at the old landfill. The best way to insure the remediation project will be funded by the voters is to keep the highway garage in the project.

Thank you for your attention.

Sincerely,



Anthony N. Lush

11 America Way
Jamestown, RI 02835
February 9, 2006

Mr. Chris Walusiak
Rhode Island Department of
Environmental Management
Office of Waste Management
235 Promenade Street
Providence, RI 02908-5167

RE: Town of Jamestown, Landfill Closure

Dear Mr. Walusiak:

This letter is in support of the Town of Jamestown's application for closure of the landfill including the construction of the new highway barn. I am a resident of the north end of Jamestown and live within ½ mile of the landfill. The North End Residents Group does NOT speak for me, and I do not believe their opinion is representative of a majority of the north end residents.

The proposed landfill closure represents a significant improvement over existing conditions, and I strongly believe that the highway barn should be placed on a site that has already been used for industrial purposes. This is what the brownfields program is intended to do, and this use of the landfill is appropriate.

Thank you for your consideration.

Very truly yours,



Victor V. Calabretta, P.E.

The Martin Family
455 Schooner Ave
Jamestown RI ZIP 02835

February 6, 2006

Mr. Chris Walusiak
RI Department of Environmental Management
Office of Waste Management
235 Promenade Street
Providence, RI 02908
FAX: 401-222-3812

RE: 50% design of the Highway Barn on the Jamestown Landfill

Dear Mr. Walusiak,

Why has the DEM not insisted the Vieira Farm wells, now property of the Jamestown Land Trust, be tested in 2006 – or tested previously in the 30% design phase of the highway barn? Those wells showed carcinogens – vinyl chloride and toluene – in both 1987 and 1992. GZA engineering said in 1992, and again last week at the February 2006 public workshop here in Jamestown, that the cancer causing contaminants came from the landfill. Two different engineering firms came up with contaminants in the 1987 and 1992. The North End Concerned Citizens have asked, and asked, and asked, that these wells be retested.

You need to contact the Land Trust board and ask that the old Vieira Farm wells be tested. Our only water supply – the same water supply that has shown vinyl chloride and toluene in well water tests near the landfill – is at risk. The risk needs to be assessed properly.

Sincerely,

Stacey & Michael Martin
Mr. Walusiak –

When we moved to Jamestown, we thought it was a beautiful, clean and safe place to live.

Now that there is ~~the~~ threat of our water supply being contaminated, we're not so sure. We have 3 young children – Tori, 8yrs, Donovan, 3 1/2 yrs & Devon, 2yrs –

RECEIVED
I.D.E.M./O.W.M.
2006 FEB 10 P 2:01

How could we continue to live here if our water is unsafe? Would you take that risk? Would you want any of your relatives in danger in their own homes? Please take the necessary precautions to ensure our water supply ^{is, and} remains safe and we can continue to raise our family in Jamestown. Our neighbors will also appreciate your attention to this matter. Please ignore the bureaucracy and politics involved in this issue ~~and~~ and concern yourself with the many human lives at stake. I've enclosed a photo of my children to help you with that.

Sincerely,
Stacey Martin

Jamestown 50% Design
Public Comment# 18
Dee Bates

417 Beacon Ave.
Jamestown, RI 02835
Jan 31, 2006

2006 JAN -3 P 3:02

The Honorable W. Michael Sullivan
Director, RIDEM
Department of Environmental Management
235 Promenade St.
Suite 425
Providence RI 02908

I would like to take this opportunity to express my concern about the proposed building a garage for town equipment at the Transfer Station in Jamestown, RI. Over the years there has been massive dumping of chemicals some known and some unknown. The potential for ground water contamination to the surrounding residential wells is overwhelming. In the interest of protecting the citizens of the town of Jamestown I ask that you please put an immediate stop to the plans that the Town of Jamestown has to build at the dump site. Please feel free to call me at 42-2141 if you have any questions.

Sincerely,



Dee Bates

C. Richard Koster
Jane W. Koster
449 West Reach Drive
Jamestown, Rhode Island 02835

2005 FEB -8 P 12:20

February 5, 2006

Mr. Chris Walusiak
RI Department of Environmental Management
Office of Waste Management
235 Promenade St.
Providence, RI 02908

Dear Mr. Walusiak:

We write as concerned residents of Jamestown with the priority of safeguarding our island's water supply and protecting our well, our health, and our property's value. "Let us err on the side of caution."

We have several clean water sites on which to build this DPW garage. We are totally and consistently against this garage being built on the landfill! We view this Town Council's decision to even go forward with this study as SENSELESS, expensive and a waste of time and energy.

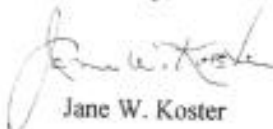
Following are only a few bullets highlighting the negatives of this proposal:

- There exists documented proof (ref GZA Transaction Screen Report, Plat 2, Lot 47, Jamestown, 1999) that pumping from additional well(s) adjacent to the facility to provide potable water will most likely enhance the risks of nearby groundwater migration.
- There exists documented proof (ref EA Engineering Science and Technology Final Report, Screening Site Inspection for the Jamestown Landfill, CERCLIS No. RID982543378, 1991) that sewage was being transported on to the Island for treatment and disposal.
- There exists documented proof (ref RIDEM (Warren M. Towne, P.E.) letter to Public Works Director, Town of Jamestown, (Steven J. Goslee), 4 Feb. 1999) that the landfill was active with sludge composting as late as 1999.
- There exists a documented statement (ref Dr. Robert Vanderslice, PHD, Chief, Risk Assessment, Environmental Health, RI Department of Health, 14 Jun 2005) that if the DPW highway barn is built on top of the landfill at the Transfer Station, it's not a question of **IF**, but **WHEN**, the wells on the properties in the vicinity will become CONTAMINATED, posing a high risk to human health.

Powers, of GZA, stated that new information since '99 has led his firm to admit the possibility that this landfill poisoned wells of the Viera property which borders the landfill.

In conclusion, we ask for responsible government on this issue; do not allow this building on a toxic garbage dump.

Sincerely,


Jane W. Koster


C. Richard Koster

To Whom It May Concern:

JAM/0114

2006 FEB -8 P 2:53

I am writing to you and your office to express my concerns about the Town of Jamestown's proposal to build a Town Barn over the existing Landfill and your Departments approval of the proposal.

At the Feb. 1, '06 Town Meeting, GZA Engineering gave an excellent power point presentation of the design plans, but failed to prove that current well tests were conclusive in the fact that well water contamination wasn't occurring.

GZA tested area wells in the 1980's in an action against the Town and concluded that some wells were contaminated because of the landfill leaching pollutants. The adjacent farm was declared undevelopable and the Town responsible.

In the 1990's, GZA was hired by the Town to test the Landfill area and see if development over the site was possible. Several tests showed pollution was evident. Over the next several years less frequent and systematic testing was performed and when a couple of the test wells showed low levels of contamination the area was now declared clean and the landfill nonleaching.

Results of scientific study are often led in the direction in which one seeks and this instance seems to support that theory: 1) incomplete and selective data compiling, 2) results based solely on professional opinion. In GZA's testing for the Town, it was their Professional Opinion that no problem existed, while it was the same engineer's Professional Opinion in the 1980's when hired by another client that the landfill was the probable source of the contamination. Why the 180 degree reversal?

I feel your department should take a hard look at all the results and take an unbiased view of the environmental impacts—even if it means your department test the wells for water quality.

Is potentially damaging area wells, polluting neighboring wetlands and shellfish beds, and poisoning wildlife worth taking the chance. It is not proven that Brownfielding works in the long term. This is not the site that Jamestown can use for the DPW facility, so wouldn't it be prudent to properly cap the landfill and keep potential risk to a minimum. It is easier to prevent than remediate. After all, the environment should be your primary concern.

Thank You:

Richard Smith

Jamestown 50% Design
Public Comment# 21
Kathleen Fitzgerald and
Keith Stavely

Kathleen Fitzgerald
Keith Stavely
212 Capstan Street
Jamestown, RI 02835
February 6, 2006

2006 FEB -8 P 12:20
Mr. Chris Walusiak
Rhode Island Department of Environmental Management
Office of Waste Management
235 Promenade Street
Providence, RI 02908

Dear Mr. Walusiak,

We submit herewith our perspective on the 50% design of the Jamestown Landfill, as presented at the Jamestown Public Library on Wednesday, February 1, 2006 by GZA GeoEnvironmental, Inc. We are homeowners in the Jamestown Shores neighborhood that is located in the vicinity of the landfill site. After attending the 50% design presentation, our principal question is, why build a highway barn in a location that has even the remotest possibility of leading to contamination of our drinking water supply? Why build it where extraordinary measures are necessary to insure no impact on the environment?

During the presentation, one of the GZA hydrologists stated that the etiology of the contamination of a well located on property abutting the landfill cannot be conclusively determined. If this is so, how can GZA determine that building a highway barn on a landfill site, even taking extraordinary precautions, definitely *won't* lead to contamination of other nearby wells? We are firmly convinced that it is not a good idea to put a highway barn where a highway barn can't be unless its surrounding soil and water are subject to intensive periodic testing and extraordinary remediation measures such as sump pumps and vortex separators, equipment which must be inspected and repaired in perpetuity. We urge you, therefore, to rule that that highway barn construction component of the landfill closure plan be eliminated from it. We residents of the Jamestown Shores neighborhood already face potential threats to our wells, due in great part to over-development. There is no good reason to place the neighborhood's sole source of water at even graver risk by constructing a highway barn on a toxic waste site, when much safer alternative sites are available.

Sincerely,




Kathleen Fitzgerald
Keith Stavely

February 6, 2006

To Whom It May Concern,

As a resident of Jamestown I have great concerns over the use of the Jamestown Landfill for a highway barn site.

While attending a presentation of Feb.1 '06 with the GZA Engineering Firm, it was stated the Jamestown Landfill was responsible for contamination of some private wells located adjacent to the landfill. Why would we want to disturb soil that could be harboring contaminants?

Also, because of the delicate soil conditions would it make sense to subject this area to heavy daily traffic? We need to consider the possibility of accidents happening due to the heavy weight of the trucks that would be utilizing the site, for example: broken water lines and sewer lines, spills ...

During the presentation GZA stated the soil to be extracted from the site of the new barn could be placed elsewhere on the site for resurfacing/leveling of land. Why would you keep contaminated soil and reuse it nonetheless? THIS MAKES NO SENSE!

Contamination to our water supply is a real threat. We have no other water source. Once this happens it would be too late - WHY TAKE SUCH A RISK?! The town's responsibility in this matter if something were to go wrong would not be guaranteed. There is no plan B. Where will our water come from?

There are many properties on Jamestown to choose from for the highway barn. It is very difficult to understand why this Plan is seriously under consideration when so much is at stake!

The future is unpredictable so why gamble with something so vital to the livelihood of Jamestown!

Please consider all the risks before making a decision that is irreversible.

A Very Concerned Citizen,



RECEIVED
U.S.M. / O.M.M.

2005 FEB -8 P 10:11

David A. King
1180 North Main Road
Jamestown, R.I. 02835

Mr. Chris Walusiak
Office of Waste Management
R. I. Dept. of Environmental Management
235 Promenade Street
Providence, R.I. 02908

Dear Mr. Walusiak,

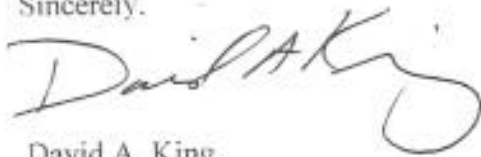
I attended the question and answer workshop in Jamestown on February 1st and listened patiently to members of GZA and the RIDEM try to explain the 50% plan for closing the Jamestown landfill and then erect a highway barn on top of an area of old waste. I was appalled to hear "experts" say that the clearing away of old waste and the erection of a large building on the site wouldn't create any disturbance that would threaten drinking water within the area. Gza was the firm that said that an abutting development should not be allowed near the old landfill due to threat to area drinking water, and that was without a barn to be erected there. At which point were they totally wrong?!, then or now?

I live less than 100 yards to the south of the old landfill and regularly test my water for contaminants. So far none have exceeded normal drinking water limits. I have installed a very elaborate water filtration system in place to protect my family, however, because there were other wells in the area that did test positive for contaminants on the adjacent Vieira Farm! To disturb the old landfill is a ridiculous risk that need not be taken. You are of course aware of course of the political battle that has been going on in Jamestown over the years on location of the barn. There are other possible sites for the barn that are safe.

An expert from the EPA and Mr. Sullivan, head of RIDEM, have both been quoted as saying that it is not a matter of "if" but a matter of "when" disturbing the old landfill would create a problem of contaminants leaching off the site. GZA is nothing more than a "hire gun" who is being paid to assist those in Jamestown who want the barn built on the old landfill so as to keep it out of their backyard. We on the north end will not stop our fight to see that the right thing is done: THAT THERE SHOULD BE NO BUILDING DONE ON LANDFILL THAT HAS AREA RESIDENTS AROUND IT DEPENDENT ON WELL WATER.

Who is trying to protect us? You certainly are not and it will be no skin off your nose if our wells get contaminated. Fellow Jamestownians will pick up the tab! Do the right thing and get someone other than GZA to do the analysis. Our experts will be heard from soon even if it has to be in court. The waste of time and money is ridiculous but this is just the tip of the iceberg. WHY OPEN PANDORA'S BOX AND HAVE US AT RISK FOR NO GOOD REASON?

Sincerely,

A handwritten signature in dark ink, appearing to read "David A. King". The signature is fluid and cursive, with the first name "David" and last name "King" being the most prominent parts.

David A. King

Jamestown 50% Design
Public Comment# 24
Donna Kane

RECEIVED
2.5.06/03.06.06

2006 FEB -7 P 10:23

Donna Kane
Braden B. Kane Jr.
1235 North Main Road
Jamestown, RI 02835

February 6, 2006

Chris Walusiak
Office of Waste Management
RIDEM

Dear Mr. Walusiak,

I am writing this letter to inform you of the deep concerns my husband and I have about the Town of Jamestown's plans to build the DPW barn on the former landfill site on North Main Road.

We find it hard to believe the town would even consider this site because all surrounding homes have ground water for wells as their only source of water. It is well known that there are many hazardous materials buried there. We are afraid any construction on that site, with heavy trucks driving there on a daily basis would certainly disrupt and pollute the ground water. This is our only source of water and the town does not have any plans to provide water if our well water is compromised.

The Town Council of Jamestown seems to be putting us all at risk. They have hired the firm of GZA for this project. GZA tested wells several years ago at the property next door, the Viera Farm, and said the wells were contaminated from the former landfill site. Now that they have this project they have flipped flopped their results from those tests. This sends up a red flag to me.

No other town in Rhode Island has had major construction built on top of a superfund site.

For the Town of Jamestown to jeopardize the health of its residents is absurd. Hopefully RIDEM will do the right thing and stop this project immediately.

Thank you,

Donna Kane

February 5, 2006

Mr. Chris Walusiak
Rhode Island Department of Environmental Management
Office of Waste Management
235 Promenade Street
Providence, RI 02908

Dear Mr. Walusiak:

Let me begin by saying that my husband and I are not members of the supposed NIMBY group of north end residents. We live far enough away from the transfer station such that we would not be affected by any activity there on a daily basis. We could, however, be very seriously affected by the building of a highway barn on the landfill site.

Last week I attended a Town of Jamestown workshop on the planned construction of the Department of Public Works highway barn. I sat amongst 75-100 other individuals who are extremely concerned about the risks and ramifications of building on an existing toxic landfill. As with all controversies, there are differing interpretations of facts and therefore, differing opinions as to the degree of risk of contamination to the island's aquifer and its resulting risk to the health and economy of the residents of Jamestown. There are discrepancies in the "facts" as they relate to the actual content of the existing site, the possible direction and distribution of the contaminants, the quantity and danger of the already existing chemicals in the tested water and the quantity and danger of the ensuing contamination if the site is disturbed. I heard alot of "we think" and "should be" and "it appears" when referring to the "probable" direction of the water flow and the "possible" contamination of private wells as well as many other aspects of this project.

I learned that over the years the Town of Jamestown has been cited by DEM for numerous violations (documented by the North End Concerned Citizens group and not disputed by DEM) at this landfill. I also learned that GZA (the town's engineers) has a lengthy history with the town that is filled with contradictory reports and misinformation (also documented). I learned that the Town Council was less than forthcoming with information on the testing results of a particular well on the site. I learned that the Town of Jamestown has no contingency plan if the worst happens and the wells (both private and town) are contaminated. I actually had a gentleman from GZA tell me that I probably don't have that much to worry about in relation to my well because the wetlands situated between the site and my home would absorb most of contaminants!! What?? How is a resident whose health and welfare are being threatened supposed to trust that this project will be done honestly and correctly. When a member of the audience stood and asked point blank if GZA would give a one hundred percent guarantee that there will be no contamination to the wells or the wetlands or the bay, GZA said it could not. That statement alone should end this project.

With all of the questions and inconsistencies involved with this project, how is it possible that this site is even being considered. I understand that the DEM prefers to utilize closed landfill properties when feasible. However, in this case, it sits on top of the island's only water source. It is incomprehensible that any official, be it state or town, would decide that any level of risk is "acceptable" when it pertains to the health of any member of its community, with the wildlife and environment within that community and with the economics of that community.

Respectfully,



Nancy L. Halstead



Robert W. Halstead
1151 North Main Rd.
Jamestown, RI

cc: Governor Donald L. Carcieri
State Majority Leader M. Teresa Paiva-Weed
The Honorable W. Michael Sullivan
Mr. Bruce Keiser, Jamestown Town Administrator

2006 FEB 7 11:10 AM

Mr. Chris Walusiak
R.I. DEM
Providence R.I.

RECEIVED
DEMOCRATIC
CLERK

2006 FEB -7 P 10:14

Dear Mr. Walusiak,

The proposal to build and utilize the Jamestown Landfill/ Transfer Station for an industrial level Maintenance Barn is ill conceived and short sighted. The GZA presentation put a wonderful surface adornment on a deep lens problem of potential pollution of ground water from the North End site.

The north end of Jamestown depends on a sole source aquifer that provides area residents with their water needs. The risk of surface as well as deep bed contamination is always a possibility. The removal and possible relocation of 10,000 cubic yards of waste at the storage site for this Highway Barn will not be risk free. Years of monitoring are proposed to track pollutants, yet GZA is unable to establish a link to polluted wells on a neighboring lot! In addition the GZA proposes to re-route existing surface water runoff.

On a personal note, my household depends on groundwater from this aquifer. My daughter, grandchildren, friends and neighbors depend on clean water from this source. I have recently received Cancer surgery and chemo therapy. Like GZA, I can't prove a direct link to my well water, but I don't want to see this risk increased upon the people of Jamestown.

Jamestown has title to many other acres with stable grounds for development. Please put an end to this proposal. Any risk to our health and safety is unacceptable.



Dwight S. Smith
87 Intrepid Lane
Jamestown, R.I.
02835

388 EAST SHORE ROAD JAMESTOWN RHODE ISLAND 02835

February 2, 2006

Mr. Chris Walusiak
RIDEM
Office of Waste Management
235 Promenade Street
Providence RI 02908

RECEIVED
DEPT. OF
2006 FEB 2 10 20 02

Dear Mr. Walusiak and the RIDEM,

We are writing to state our opposition to building a DPW Highway barn on top of Jamestown's Landfill. We think this is a bone-headed and dangerous idea. These are some of our reasons why:

1. Possible Contamination of private wells from existing Landfill:

GZA has documented the contamination in two wells on the adjacent Viera Farm. They are on the record as saying that the contamination was likely due to the Landfill. If it has happened already it may happen again.

2. Possible Contamination of wells from the proposed Highway barn:

Storage and maintenance of numerous heavy vehicles on site will increase the chances of oil or gas spills into the soil. Once MTBE(gasoline additive) is introduced to the ground water at the site, it will be impossible to remove. Gravel roads and parking areas at the Transfer Station also mean that any vehicle leakage goes straight into the soil.

3. There is no "Plan B":

If any homeowner at the North End were to experience well contamination due to this project, the town will not provide a back-up water supply. The town has stated repeatedly that it cannot and will not extend town water to the north end of the island. There is simply not enough water to do that.

4. The town does not maintain things properly:

At GZA's presentation on February 1st, we heard a lot about fancy drainage ditches with elaborate sumps with oil and water separators. Have you seen the drainage ditches at the Transfer Station now? They are a mess. It is extremely unlikely that Jamestown will maintain the barn to the highest standards once it is built.

5. The town is a bad neighbor:

The town continues to use the Landfill as a dumping ground, in spite of saying the landfill has been closed for years. Recently, the town dumped waste from sandblasting the Water Tower at the landfill. This was reported to DEM, which ordered the town to remove it. The town has a history of irresponsible behavior at the Landfill.

6. The town has not explored all options:

The town owns a huge amount of land on this island, as does the State and the Bridge Authority. There are many alternative sites, where town water and sewer are available, where this facility could be built.

7. The Landfill should be properly closed:

The Landfill should be closed, capped, and monitored. Building the Highway Barn on top of that already complex project is asking for problems.

We hope that DEM will consider these points, and will treat this issue with the seriousness it deserves. Even the remotest chance that building this facility on this site could risk further contamination and potential health hazards to any and all parts of the island, which depends on a single aquifer, should make it clear that the proposal should be rejected.

Thank you for your consideration.

Sincerely,

David Bolger



Mark Lancaster



STEVEN W. JEPSON
78 COLUMBIA LANE
JAMESTOWN, RI 02835
TEL: 401-423-7450
FAX: 401-423-7451

February 9, 2006

Mr. Chris Walusiak – RIDEM
Office of Waste Management
235 Promenade Street,
Providence, RI 02908

Via FAX – Page 1 of 3

Re: Jamestown Landfill – Objection to current closure plan

Dear Mr. Walusiak:

I reside in a development named East Passage Estates, which consists of 97 single family properties (80,000 sq. ft. minimum lots) and is totally dependent on individually owned wells for water. Real Estate sales in CY2005 ranged from \$700,000 to \$1,150,000. My property (purchased in 1996) is located (see attached plat map) on the northern border of the development. Three weeks ago I learned for the first time that I am within one-half mile of a EPA designated CERCLIS hazardous waste site and that my property abuts a property (see attached plat) formerly called the "Vieira Farm" which has a history of well contamination from the Jamestown Landfill.

I have done my best to educate myself on the potential threat to my water supply and the Jamestown Town Council's plan to close the landfill with inclusion of new construction for a Highway Garage on the site. On Wednesday evening, February 1st, I attended a public workshop meeting. Representatives of your DEM department and the town's contracted engineers, GZA made presentations and took questions from concerned Jamestown residents. My wife and I, as well as most of the audience, were quite frankly appalled by some of the responses by GZA to questions concerning the Vieira Farm property.

Background (as I understand it)

Sometime prior to 1990 a developer purchased the Vieira Farm property and at some point discovered that property was not buildable because of water contamination. The developer defaulted on his loan from the Davisville Credit Union. Then Davisville went into receivership during the credit union crisis. The receivers of Davisville hired GZA to examine the Vieira Farm property's water issues. GZA issued a report to their then client (Davisville) in 1992 that GZA's geohydrologic study on the Vieira Farm property that the Jamestown Landfill WAS THE SOURCE OF GROUNDWATER CONTAMINATION OF WELLS on Vieira Farm. Davisville sued The Town of Jamestown and received an out of court settlement.

Workshop Meeting 2/1/2006

The author of that report happened to be at the recent February 1, 2006 meeting. When questioned about that 1992 report that same GZA engineer (now with a new client – the Town of Jamestown) stated that now he isn't sure if it was definitely from the landfill, etc.

(Continued Page 2)

Page 2 of 3 (Vieira Farm continued)

Then a gentleman in the audience, who had been a principal of Davisville Credit Union at that time of GZA's 1992 report, pressed the issue at length. GZA responses danced all over the place, but it ended with the most important question. "Do you stand by your report in 1992? Yes or No?" The GZA author timidly responded, "Yes".

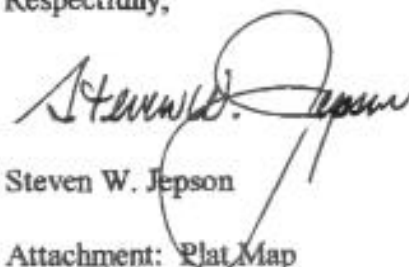
To the best of my knowledge, GZA HAS NOT DONE ANY RETESTING ON THE VIEIRA FARM PROPERTY IN CONNECTION WITH THIS CURRENT PLAN.

How can GZA and the Town of Jamestown present a plan for 50% approval to anyone if they have not tested properties bordering the landfill, especially Vieira Farms with its history?

I URGE YOU AND YOUR DEPARTMENT, AS A PROTECTOR OF THE ENVIROMENT AND GUARDIAN OF THE PUBLIC'S HEALTH, TO BRING TO A HALT THIS CURRANT PLAN UNTIL THE VIEIRA FARM PROPERTY'S EXISTING WELLS ARE RETESTED AND THAT NEW ADDITIONAL TEST WELLS ARE DRILLED ALONG ITS SOUTHERN AND EASTERN BORDERS.

The Town of Jamestown is reckless in pursuing a plan that has not even tested geographic areas adjoining the landfill. The Town is ignoring the potential high risks to its residents and has no contingency plan if something goes wrong and contaminates our well water. You and your department know the geology of this island. Private well water supplies approximately 450 homes within a 1-mile radius of the Jamestown Landfill. PLEASE HELP US.

Respectfully,

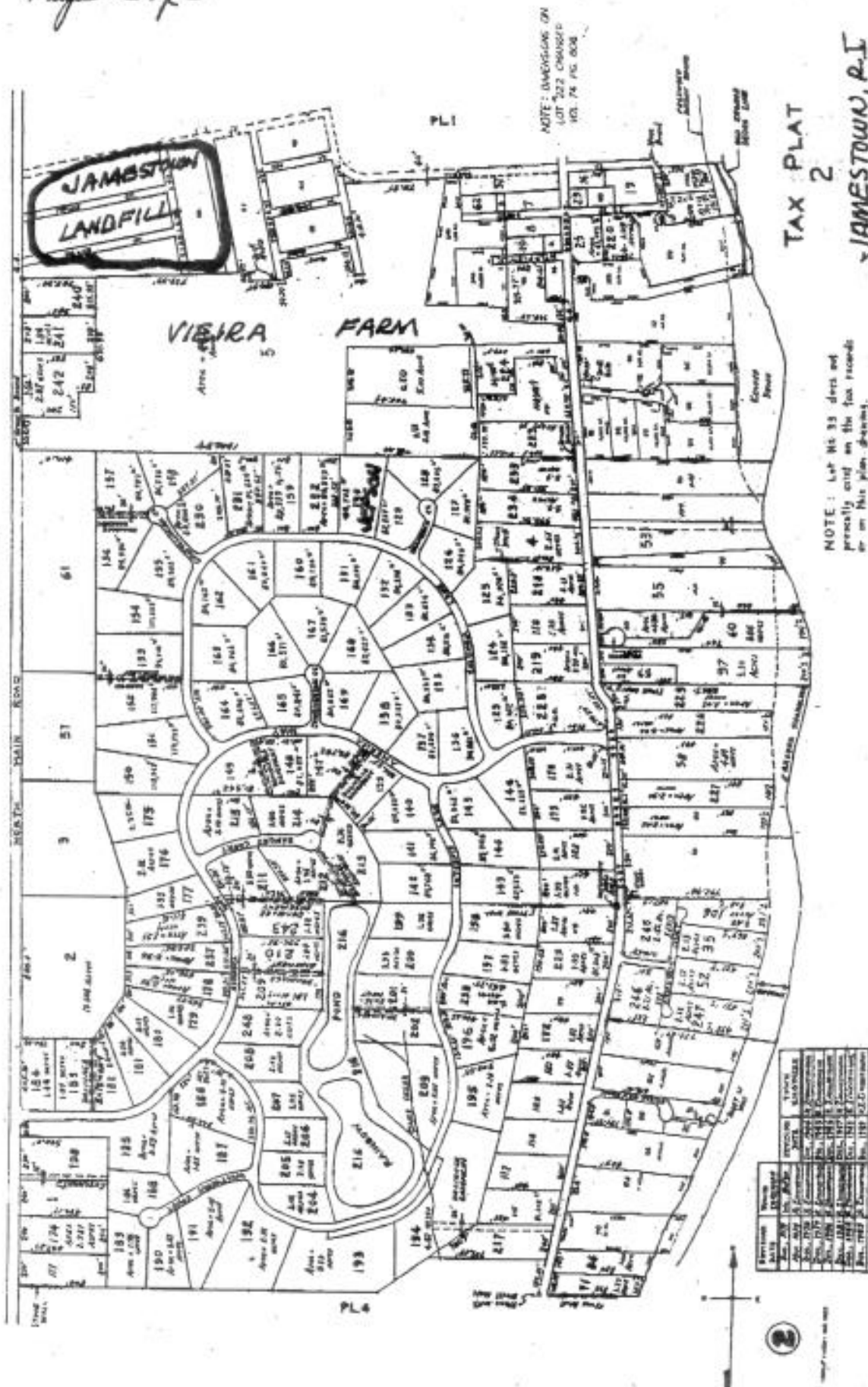
A handwritten signature in black ink, appearing to read "Steven W. Jepson", is written over a printed name and an attachment label.

Steven W. Jepson

Attachment: Plat Map

Page 3 of 3

FOR CONTINUATION SEE PLAT 3



NOTE: DIMENSIONS ON LOT 222 CHANGED TO 74 PG 008

TAX PLAT 2

JAMESTOWN, P.I.

NOTE: Lot Hs 33 does not presently exist on the tax records or on this plan drawing.

SECTION	TOWNSHIP	RANGE	LOT	ACRES	OWNER
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Jamestown 50% Design
Public Comment# 29
Susan and Abbott
Gregerman

Chris Walusiak
RI Department of Environmental Management
Office of Waste Management
235 Promenade St.
Providence, RI 02908

Dear Mr. Walusiak;

We are writing to voice our concern about the construction of the Jamestown highway barn on what was once the Jamestown landfill. This lengthy debate has become a battle of the data between the concerned citizens of Jamestown and the GZA engineering firm. Without becoming entangled in that battle, we would like to state our opinion, one of basic common sense. Let us be safe and cautious by capping the landfill, following Federal and State regulations, and just walk away. Let us not tamper with the fragile integrity of our water system. Disturbing contaminated soil so close to our wetlands seems to be an act of recklessness. We islanders have but one aquifer to provide our drinking water. If it becomes polluted, where will we turn? More than half of our residents depend on wells for their water. We have no backup system. We must not gamble with the health of our island. We have only one responsible course of action - to err on the side of caution and not put our residents in harms way.

Respectfully submitted,

Susan and Abbott Gregerman
34 Capstan Street
Jamestown, RI 02835

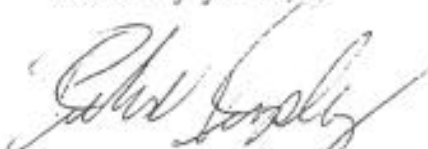
Chris Walusiak
RI DEM Office of Waste Management
235 Promenade St.
Providence, RI

February 10, 2006

Dear Mr Walusiak,

I am a resident of Jamestown, and I wish to comment on your plans for the Jamestown landfill and siting of the proposed town highway barn. I am a geologist and scientist by profession and I believe I understand the data that has been collected by your consultant (GZA) regarding the ground water in the area. I agree that the issue of siting of the town highway barn and the possible mitigation of any groundwater hazards are unrelated. A few vocal people who reside in the area near the landfill have voiced concerns about possible pollution from the construction and use of a part of the area for the highway barn. In my view these concerns are completely without merit and their issues can be rectified by proper construction and storage practices. Therefore I ask that any plan you propose *allow* for the siting of the town highway barn at the landfill location. This should be made clear without delay so the town and its taxpayers (who have voted to approve the site and construction) can move to the completion of this project. Thank you for your attention.

Sincerely yours,



Richard Kingsley, PhD.
85 Clinton Ave.
Jamestown, RI 02835

RECEIVED
D.E.M./O.W.M.
2006 FEB 10 PM 3:34

Jamestown 50% Design
Public Comment# 31
David Coppe, M.D.

DAVID COPPE, M.D., F.A.C.S.
VASCULAR AND GENERAL SURGERY

BORDEN CAREY BUILDING, SUITE 360
19 FRIENDSHIP STREET
NEWPORT, RHODE ISLAND 02840
TELEPHONE (401) 847-8700

70 KENYON AVENUE, SUITE 25
WAKEFIELD, RHODE ISLAND 02879
TELEPHONE (401) 789-3377

Mr. Chris Walusiak
RI Department of Environmental Management
Office of Waste Management
235 Promenade Street
Providence, RI, 02908

February 6, 2006

Dear Sir:

I write hoping to weight to the Jamestown residents who will be affected by construction on the Jamestown landfill. The landfill shouldn't be used for anything other than capping. Although each neighborhood has objected to the placement of the Highway Barn near them, the landfill problems go beyond neighborhood objections to health and property concerns for the island. Potential contamination of the ground water, private wells and even the reservoir could lead to health concerns resulting in a legal morass and paralysis motivated by fears of what might be. Detecting toxic substances, even in only trace amounts, could lead to concerns by the residents for their health. If they think their property values are being affected they and the banks that hold their mortgages may seek legal compensation.

Perhaps the town council hoped that no one could object to the landfill, a property that seemingly has no value to anyone. Unfortunately, what lies under the landfill has value to everyone. The risks, real or imagined, are too great. The landfill needs to be left alone.

Sincerely,


David Coppe, M.D.

Ellen Winsor
736 East Shore Road
Jamestown, Rhode Island 02835

Mr. Chris Walusiak
RI Department of Environmental Management
Office of Waste Management
235 Promenade Street
Providence, RI 02908

February 10, 2006

Mr. Walusiak,

My letter to you deals with the remediation of the landfill on Jamestown and the issue of the highway barn; but first, two studies by the Massachusetts Department of Health: Kevin Kane regarding Nyanza, and Cape Cod, followed by 'citizens' participation and questions', The Weingand Principle, Environmental Justice, Public Trustees and EPA data, respectively.

CAPE COD, MA DOH, KEVIN KANE, NYANZA and ASHLAND, MA
Wednesday, February 8, 2006, NBC 10 TV news noted Cape Cod children have a much higher cancer rate than the national average. The aquifer down The Cape is contaminated and now the community of Sandwich is under review by the Massachusetts Department of Health. (The article from The Cape Cod Times, dated February 8, 2006, is attached.) This month, according to MA Department of Health epidemiologist, Teresa Cassidy, the Massachusetts Department of Health will announce the results of the Kevin Kane nationwide peer review health study regarding the deaths of men in their late twenties, all dying from a rare bone cancer, all childhood friends who lived near to and played on an EPA remediated site. In the late 1970's two women from Ashland, MA wrote their state senator and state representative noting little children on their different streets had developed cancer. The EPA remediation of "Nyanza" began in 1982 in Ashland. Thirty-six years later - still in 2006, the community grapples with the contamination both emotionally from the deaths, from health uncertainties, from the 'unknowns' underground and financially from lower property values. Ashland had nine town administrators in thirteen years with the Board of Selectmen running the town for three years; the contamination problem was so enormous and burdensome. The 35-mile Sudbury River remains contaminated. Now the cycle of contaminants and grave health concerns starts anew this week in the beautiful community of Sandwich, in coastal Cape Cod.

JAMESTOWN, RI

On Jamestown our sole source aquifer, the fractured bedrock under Jamestown, is now subject to risk. In order to limit the aquifer's exposure to contaminants, please remediate the landfill at the highest regulatory standards, cap it at the most stringent level - no variances - and let the land rest. Protect the aquifer. Do not put a highway barn needing endless layers of technology to filter and contain contamination, with the accompanying maintenance necessary to keep the whole system functioning, onto our fragile ecosystem. Our aquifer, as you must know by now, cannot be supplemented by water from off island. The public reservoir water (also supplemented by a municipal well from the aquifer) cannot now meet the needs of the 43% currently served, to fathom adding the private well owners too. Plus not one inch of pipe is in place to connect the private well owners to the reservoir. We do not want to subject our health, the health of our neighbors, their children, and pets, our finances - both public and private, and our local government to the chaos of contaminants suffered by other communities.

CITIZEN'S PARTICIPATON AND QUESTIONS

At a Jamestown town council meeting about six months ago with GZA Engineering and town Administrator Haddad present I put in writing three questions: one about the Rosehill landfill shared by Narragansett and South Kingstown and the other about Nyanza. The GZA engineer present not at all readily answered the fact that the Rosehill landfill leaked, and private wells were contaminated, and that town water was readily available to the private well owners. My question about Nyanza wasn't addressed at all. After the microphones were off and people were milling I heard by chance a man ask the GZA engineer, "What was the Nyanza?". The engineer answered him revealing details about Nyanza. Standing near me was Claire Ferguson, our relatively new town council member. I said to her with incredulity, "He knows about Nyanza. He's speaking about this." Before the start of that meeting I mentioned to Councilwoman Ferguson and to Rep. Bruce Long that a study was underway in the town of Ashland, MA, regarding a contaminated site called Nyanza. I said the boys were getting sick, not the girls, because the boys were the ones who played in the woods. (This was how the people of the town of Ashland were speaking about their circumstances.)

We wrestle with the fact that all has not been open, informed and democratic in this landfill remediation and highway barn process, especially given that those in the North End were not allowed to have a Citizen's Advisory Group as have all other citizens been allowed. We were not allowed to give the North End Concerned Citizens' Laptop PowerPoint presentation to the Town Council, resulting in substantial press coverage, and after a months time, when we were still not allowed to make a presentation to the Council, we forced the council to 'see' us speak. We had to create a human 'puppet' act of multiples of us sitting, and us standing, reading dry statistics, trying to convey reams of original documents in a fairly useless fashion.

THE WEINGAND PRINCIPLE

I suggest the RIDEM acknowledge the following principle. The Weingand Principle, written with international participants ranging from MIT to Physicians for Social Responsibility, and Silicone Valley Toxics Coalition to National Chemical Inspectorate in Sweden, to the University of British Columbia, Canada, amongst others, reads: "When an activity raises threats of harm to human health or the environment, precautionary measures should be taken even if some cause and effect relationships are not fully established scientifically. In this context the proponent of an activity, rather than the public, should bear the burden of proof. The process of applying the Precautionary Principle must be open, informed and democratic and must include potentially affected parties. It must also involve an examination of the full range of alternatives, including no action."

JAMESTOWN AND PUBLIC TRUSTEES

A degree of environmental injustice is being placed on the north end homeowners in Jamestown. Our private wells will receive contaminants first and foremost for the sake of a public project. Six inanimate trucks, six dead trucks, are so important as to risk the only water supply on an island. Contaminants have been documented in wells, and more may yet be released to migrate to more wells, and to the public water supply via the community well, if a full remediation of the EPA CERCLIS Jamestown landfill is not RI DEM remediated at the highest 2006 regulatory standards. A paper entitled: *Government has a Public Duty to Take Precautionary Action to Achieve Environmental Justice*, reads, "In essence, public trustees must recognize that future patterns in land use and resource consumption may create ecological problems that trigger public trust duties to regulate these uses and, consequently, impact private property owners. If the trustee waits for threats to fully manifest themselves, it will be too late - the trust property will have been harmed by the time action is taken. (The trust's) obligation is perpetual and requires both preventive measures to protect environmental health and remediative measures where past behavior has breached the trust. In sum: Government has a duty to promote

and maintain a healthy natural environment on behalf of current and future citizens. This duty is not optional: it is a mandatory, affirmative duty that government cannot deny, repudiate, or alienate. Protecting the environment and achieving social justice is the duty—and the honor—of government. Government has a clear mandate to do the job, to protect our common heritage, AND to achieve justice, including of course environmental justice."

EPA DATA

"To date, under removal authority, EPA has provided alternative drinking water to nearly 615,000 people at National Priorities List and non-National Priorities List sites where available supplies were determined to be unsafe, and has relocated over 45,000 people when contamination posed the most severe, immediate threats to life and health, or temporarily because of a response action.", per the EPA web site. We in Jamestown do not want to be added to this list, we do not want to be victimized twice - to lose our water supply and then go to court to pay back the DEM and EPA for their costs in helping solve the problem we tried to avoid in the first place.

SUMMARY

The EPA has given the RI DEM a chance to oversee the remediation of the Jamestown Landfill. Let environmental history advise you; let the limitations of science and technology serve to remind you, and let wisdom guide you. Keep all hubris at bay: excessive engineering prowess, brownfield trends, EPA brownfield funding, island politics past and present, the influence of past leaders and the trivialization of past landfill violations. Maximize Jamestown's aquifer protection - no variances, and all remedies must meet the strictest current regulations. The Jamestown landfill has leaked carcinogenic contaminants to adjacent property. Future technology may help alleviate and remediate landfill risks. Cap it now and leave it alone. We shouldn't push our luck by building a highway barn with an "elaborate life support system" on the landfill, as was written recently to the editor of The Jamestown Press by Fitzgerald and Staveland of Capstan Street.

Remember young Kevin Kane in your decision-making. It was at his request that the Massachusetts Department of Health Nyanza study was undertaken. His first name, Kevin, means 'warrior'. Perhaps after death Kevin will serve as sentinel-warrior for others at risk. His story is a cautionary one for you as you weigh the risk (versus the reward) of what the people on the island of Jamestown are facing.

Sincerely,



Ellen M. Winsor

Sandwich cancer study 'significant'

By ROBIN LORD
STAFF WRITER

SANDWICH - The state health department's decision to take a closer look at childhood cancer rates in Sandwich is "significant" on its own, according to a former state public health researcher.

"It's pretty uncommon," said Dr. Richard Clapp, one of the founders of the Massachusetts Cancer Registry and now a professor of environmental health at Boston University School of Public Health. "If I was a parent in Sandwich, I would say, 'We were concerned and now it's clear we had a right to be concerned.'"

During his employment at the state Department of Public Health from 1980 to 1989, Clapp said the agency agreed to only two or three in-depth childhood cancer studies out of the hundreds of requests they received from communities across the state each year.

State public health officials announced Monday they will launch an in-depth study of elevated rates of childhood cancer cases in the southeastern section of Sandwich. The announcement came about 18 months after the department began a preliminary look at childhood cancer rates in town, which was prompted by concerned parents.

While state investigators will give no assurances of whether they will find causes for the elevated cancer rates, Clapp said past studies have had some success in linking causes to disease.

He said the study the state has committed to is "step two" on a three-step tier of studies done at the Department of Public Health. An even more in-depth analytical study - or "step three" - would include interviewing families with children who do not have cancer to compare lifestyles and possible environmental exposures, Clapp said.

Ann Condon, whose daughter was diagnosed in 2004 with a rare bone cancer, Ewing's sarcoma, said she is unsure how many answers the department can find by interviewing parents.

"We don't know almost everything there is to know about Ewing's sarcoma and they have no idea what causes it. So, when they say they're going to do follow-up work, what good is that going to do?" she said.

Clapp, whose research interests include the health effects of dioxin, radiation and environmental exposures to toxic chemicals, disagreed with Condon's pessimism. He said if state researchers are alert to potential risk factors during the interviews, important new information could be found.

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Clapp was on a professional advisory committee for a study done by the state health department on elevated cancer rates among Upper Cape adults in the early 1990s. The study found a link between the burning of propellant bags on the Massachusetts Military Reservation and elevated lung and breast cancer rates in the area.

The study also linked leukemia rates in the area to tetrachloroethylene, or PCE, liners in the municipal water pipes in the Falmouth area. Brain cancer cases were linked to pesticides on cranberry bogs.

"It didn't explain the whole story, but there were definitely some findings," Clapp said.

The number of childhood cancer cases in Sandwich between 1995 and 2002 was 10, while 7.5 would be expected based on the state average. Seven more Sandwich children have been diagnosed with cancer in the past three years.

The Sandwich childhood cancer numbers, in and of themselves, do not rise above the state's threshold for a more in-depth study, but a closer look at the figures in the southeastern part of town revealed that four girls were diagnosed with cancer from 1995 to 2002, while the state would have expected only 1.2 cases, said Suzanne London, an assistant commissioner at the state Department of Public Health.

The state was also concerned that three of the six children diagnosed with leukemia from 1995 to 2005 lived in the same area of town, called census tract 0135, which is bounded by Route 6, Quaker Meetinghouse Road and the Mashpee and Barnstable town lines.

London stopped short of calling the rates a cancer cluster - a term used by epidemiologists to describe an explained proliferation of cancer in a particular area. She instead called it "an unusual pattern."

In the coming months, the state will send researchers to Sandwich to interview parents of children with cancer to try to find clues to why the rates are elevated in census tract 0135. They will also be looking at several environmental factors in the area, such as drinking water wells, that may be playing a part in the elevated cancer rates.

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February 7, 2006

D.E.H. / 000000

Mr. Chris Walusiak
RIDEM
Office of Waste Management
235 Promenade Street
Providence, RI 02908

2006 FEB 22 P 12: 28

RE JAMESTOWN LANDFILL

Dear Chris,

Please, please, please hear our plea! We are asking that DEM apply the most stringent remediation requirements permitted within the regulations to remediate our landfill.

Why? Because Jamestown's landfill is unique.

FACT: Jamestown is an Island – 9 miles long, 1 mile wide.

FACT: Jamestown is a sole source aquifer with no alternative water supply, either from neighboring communities or the municipal system.

FACT: Jamestown's landfill is surrounded by private wells.

FACT: Jamestown has a highly fractured bedrock aquifer in which contaminants can flow in many directions and for several miles.
(Dr. Frolich, URI)

FACT: Jamestown's landfill has seeped toxic VOC's off the landfill in the past.

FACT: On February 1st GZA said they could not guarantee that pollutants would not contaminate our wells in the future.

FACT: 57 % of Jamestown residents depend on private wells.

FACT: If the bedrock aquifer becomes polluted those of us on private wells have no recourse. Our health, safety and welfare will be compromised for all time.

Therefore we are asking you to remediate to the highest Standards.

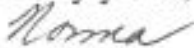
Install an impermeable cap over all the waste. In the area where the highway barn will be constructed please remove all waste and soil. See enclosed article re "lightly contaminated soil" If such soil should not be used to protect the Blackstone River, how much more crucial is human drinking water? To preserve the integrity of the cap, pave where there is vehicular traffic. Manage stormwater on site. Our wetlands recharge our wells and ultimately run through a salt marsh into the Bay.

Chris, our concern is our drinking water. Although the contaminants now appearing around the edges of the landfill are below safe drinking water standards, EPA has said that low levels in combination may be more carcinogenic than one lone pollutant.

At my age, I remember well when we used lead paint on our houses and asbestos wrappings on the pipes in our cellars. We didn't know any better ! But today we know these VOC's and metals are dangerous and we do not want to drink them even at low levels.

We are asking that you, RIDEM, the protector of the environment, protect us now, before pollutants show up in our drinking water.

Sincerely yours,



Norma Willis

1191 North Road

Jamestown, RI 02835

Blackstone River passes through Woonsocket.

Worcester's sad gift to the Blackstone

WENDY WILLIAMS

USING "lightly contaminated" soil on old landfills is common practice, but is common practice good enough when it comes to the Blackstone River? *Jameson's drink*

Prof. Steven Corey, a professor of urban studies at Worcester State College, wants to know. Corey is "outraged" that the City of Worcester recently began re-capping an ancient city landfill on the Blackstone with "lightly contaminated" soil. The Blackstone was the subject of a major clean-up operation in recent years, in part because of the creation of the Blackstone River Valley National Heritage Corridor, in 1986.

What was once a heavily polluted stream whose bankside factories gave it the monicker "the hardest-working river in America" has in recent years become a tourist and recreational (kayaking, etc.) attraction with growing celebrity. Luxury lofts are now being sold at high prices in converted mills along the river.

Worcester's recapping with the contaminated soil follows a decision last fall by Massachusetts Environmental Secretary Ellen Roy Herzfelder to waive a requirement that the city do an environmental-impact report on the landfill. This won't help make the river safely swimmable — one of the qualities that the river still lacks.

By contrast, the City of Woonsocket, downstream in Rhode Island, is capping an old landfill, also on the banks of the Blackstone, with clean "virgin" soil.

"I can't believe nobody is saying anything about this," Corey says of

Worcester's action. "A deal has been made that might allow more hazardous waste into the headwaters of the Blackstone River, and I don't think anyone in Providence even realizes this is going on."

Corey is a garbage guru. He wrote his dissertation on the history of garbage in New York City. The dissertation was so good that he was asked to turn it into a book, to be published by the University of Pittsburgh.

Worcester's Greenwood Street landfill sits on a hundred-acre site — right on the river bank — used for more than a century. In 1985, the landfill was closed. Part of the site was lined and capped, but the old cap is deficient, and exuding toxic effluent. City officials tried to capture the effluent and pipe it into the adjacent sewage-treatment plant, but this summer the city has begun re-capping the old landfill.

Others also wonder what's up.

"This smells. It smells worse than the river used to all those years ago. I'm not too happy with some of the answers I've been getting from people on this," says Roland Gauvin, a member of the Northern Rhode Island chapter of Trout Unlimited. "I'm not a person who gets apathetic, but I've been fighting for this river for more than 30 years. This is very disheartening to see what they're doing up there. Gov. Mitt Romney is just dragging his feet on a lot of the clean-up for the river."

Critics point out that Woonsocket floated a \$5 million bond to cap its landfill on the river, and is using clean fill.

Meanwhile, the Massachusetts Au-

dubon Society's Donna V. has been part of the team that designed the design for the Worcester would rather see clean fill at the Greenwood Street landfill.

"The more we can reduce the potential for any kind of contamination, the better," she says. "But I think economics play a role. It's not enough to think that they're doing it."

By using lightly contaminated material, Worcester is not paying the cost of buying clean fill. It receives \$1.25 a ton, or \$1 million a year, in tipping fees from the Department of Public Works Director Robert Moylan. If guards will be used, he says, that the pollution from the landfill find its way into the river is standard practice, he says.

"Massachusetts has a policy that has ostensibly been in place for years, but it's not being repaired, at how that policy is done," he says. "It's a good opportunity to have repaired using material that might have to go somewhere else. Higher disposal costs would be paid by them. The policy seems to have a lot of sense. This isn't being dumped anywhere to a hazardous-waste site. It would be paying premiums."

Still, Worcester and other officials need to find a way to stop dumping contaminants in the headwaters of this beautiful river.

Wendy Williams, a contributor, is an environmental journalist based in Cape Cod.

Lee Tuthill
120 Gondola Avenue
Jamestown, RI 02835

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D.E.M. / O.W.M.

February 9, 2006

2006 FEB 13 P 12: 20

Mr. Chris Walusiak
Rhode Island Department of Environmental Management
Office of Waste Management
235 Promenade Street
Providence, RI 02908

Dear Mr. Walusiak:

I am in favor of the proposed Jamestown landfill remediation project which includes reuse of the landfill for the highway garage. I support the proposed plan because it will improve groundwater protection while providing a much needed garage for the highway department.

I hope you will base your decision solely on good science and engineering and will not be influenced by political pressure. As the vote last spring by all islanders proved, most Jamestown residents want to see the highway barn built at the old landfill site. The best way to insure the remediation project will be funded by the voters is to keep the highway garage in the project.

I reside north of Route 138 and have a private well which I am told, provides water from the same aquifer that the north enders use. I feel quite confident that the past and current testing procedures and the results from those tests have proven that it will be safe to approve the landfill remediation and Highway Barn project as presented at the February 1st workshop.

Sincerely,



Lee Tuthill, PE

2/8/06

Dear Mr. Walusiak:

Please accept this signed letter as an indicator of our concern regarding the proposed highway barn building in Jamestown. We have followed this issue closely for years and have become more and more dismayed and disturbed by the tactics being utilized by a small group of local residents who do not want this facility built anywhere near their homes. For the most part, they have both money and powerful connections in state which they would like swords to achieve their ends. Those of us with less of each, urge you to disregard their rhetoric in determining the merits of this proposal. No one in Jamestown wants to threaten the viability of the well water on which so many of us depend, but there is absolutely no evidence that building a highway "barn" facility as proposed, will in any way jeopardize any water supplies on this island. These people are doing their utmost to use and abuse the system to achieve their goals. -7

Please, ignore the background noise
they have introduced, no matter its
intensity, and focus on the facts.
There is absolutely no reasonable
scientific evidence to deny the majority
of Jamestowners who have voted to
build the highway here at its
proposed location. This process has
been ongoing for many years and
Jamestown can not continue to
debate this proposal indefinitely.

I implore you to disregard the
self-serving and ill conceived objections
you have heard, and base your
assessment and ultimate decision
based solely on scientific method
and fact.

Thank you for your consideration -

Sincerely

James D. East



Jamestown 50% Design
Public Comment# 36
J. Christopher Powell,
Jamestown Conservation

JAMESTOWN CONSERVATION COMMISSION

JAMESTOWN TOWN OFFICES
44 SOUTHWEST AVENUE



P.O. BOX 377
JAMESTOWN, RHODE ISLAND 02835

14 February 2003

Christopher Walusiak
Division of Waste Management
R. I. Department of Environmental Management
235 Promenade Street
Providence, Rhode Island 02908-5767

RECEIVED
D.E.M./O.W.M.
2006 FEB 16 P 12:23

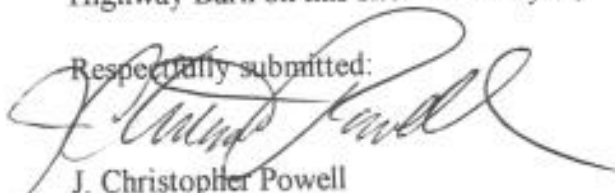
Dear Mr. Walusiak:

Per your request I am forwarding the content of the e-mail I sent to you from as Chair of the Jamestown Conservation Commission on February 9th, 2006 regarding the Commission's position on the proposed reuse of the Jamestown Landfill as a Public Works Facility.

As Chair of the Jamestown Conservation Commission for over 23 years I am will acquainted with this entire issue as is the Conservation Commission. We are on record with the Town Council as supporting the location of the Highway Barn on the former landfill site. We have looked at and evaluated many options over the years and feel this site is the proper and most suitable location for this type of use. We see this as a great opportunity for the Town to improve a Brownfield site rather than turn more of our greenfields into an "industrial" type use. We also see the location of the highway facility at this site as integral in the remediation of the old landfill. Both would benefit from this project.

We hope you will take the interest of the entire community into consideration in your decision and approve the landfill closure plan which includes the location of a new Highway Barn on this site. Thanks you,

Respectfully submitted:


J. Christopher Powell
Chair

Michele Musselman

From: Kurt Musselman [kurt.musselman@buzzerbrow.com]
Sent: Friday, February 10, 2006 3:16 PM D.E.M. / O.W.M.
To: Michael Sullivan; Chris Walusiak; Angelo Liberti
Cc: Bruce Keiser; Charles Fogarty; david.manning@dem.state.nh.gov; Donald Carcieri; Jay Manning; Michele Musselman; Patrick Kennedy; Patrick Lynch; Robert Vanderslice; Teresa Paiva-Weed
Subject: Jamestown: DEM's first landfill closure proposal and controversy

To whom it may concern:

I am writing to you in regard to the planned Highway Barn proposal for Jamestown, RI.

In short, I am opposed to the current 50% plan as presented for three reasons: the

improper closing of the landfill and siting of a public works facility on top of the landfill,

the potential risk to the surrounding private wells, wetlands, and bay, and lastly, the

exposure of the town to financial liability in the future. The coupling of the landfill closing

with the highway barn construction serves to cloud this issue in controversy. In addition,

the proposed site really does not seem to be the appropriate site to be DEM's first official landfill closure in the state.

To tell you a little bit about myself, I am 38 years old and have lived on Jamestown my

whole life. I was brought up by a father who worked for the FDA to protect our estuaries,

bays, and shellfish, and a mother who currently works for DEM as a Senior Environmental

Planner in both the Water Quality Division and the Policy Office. I have worked very hard

to be able to purchase a home on the island I grew up on. Growing up on Jamestown

instilled me with a passion for and appreciation of the beautiful natural surroundings

we are blessed with in our state, the "Ocean State." Many of my experiences in my years

of schooling centered around either enjoying the beauty of or respecting the fragility of our

natural resources, most importantly our WATER. These include sailing in and around the

Bay, learning about science by studying the marsh ecosystem and biodiversity on Jamestown,

learning about pollutants and marine life in various Save the BAY kids programs, participating

in The Fool's Rules Regatta, watching the Save the Bay Swim across the Bay, learning about

the importance of spaying, neutering, and controlling the population of our animals with the

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D.E.M. / O.W.M.

2006 FEB 10 P 3:35

Jamestown Humane Society, etc.

As I went first to the Marines and then to URI for two degrees (BA and BS), I continued to have a growing interest in protecting what I feel is important and at one point interned in the Attorney General's Office while contemplating attending law school. I actually turned down an internship in DEM's OSCAR recycling program to be more closely involved with environmental law at the AG's office. I took a graduate level class in Environmental Law and Policy at URI and learned a great deal about the procedure for and difficulty of prosecuting people and companies who perpetrate harm against our environment. My time in the RI AG's office was spent working for Mike Rubin who was an Assistant AG. Mike is a very talented environmental advocate who tirelessly pursued the prosecution of people responsible for various offenses which either directly harmed the environment or posed a substantial risk to the public at large. The most memorable project that I worked on directly was the "Davis Tire Pile" (a former EPA Superfund site) which was basically a toxic waste dump with approximately 9 million tires piled on top of it. A few notable legal terms and theories I experienced first-hand included "piercing the corporate veil," which means being able to hold an individual liable for actions taken by or for an entity such as a corporation or governing body, and the use of potential risk and negligence as a basis for legal action in environmental cases.

Eventually I decided that I would pursue a career in brewing. Brewing is a passion for me, one in which I can exercise my artistic talents as well as my interest in science. My job as a brewer has enabled me to travel extensively throughout the US and the world. Most recently I went to a conference in New Orleans and travelled across the causeway in Lake Ponchartrain to a brewery tour. One has a bit of time to reflect while driving more than 23 miles across water. Basically I take raw materials from Germany and Britain, then mix them with local well water to prepare a medium in which I grow yeast. The goal is to create a potable, safe product that adheres to a stringent set of standards that are set internally by my company. The QA/QC methods I use to ensure the consistency and safety of the product are derived from a set of protocols developed by NASA to ensure the safety of the food supply for our astronauts. This method is called HACCP, which stands for Hazard Analysis and Critical Control Points.

The basics of this system include identifying potential hazards, setting control limits, and then monitoring the process to ensure that the process stays within these limits. Needless to say, I have more than a passing familiarity with risk involved in water contamination, water quality, water treatment, water analysis reports, and water contaminant levels. I chose a career as a Brewmaster in order to create something that is safe, natural, enjoyable, and sustainable. I have spent a lot of time learning how to create my product while avoiding damage to the environment. I am more than just a Brewmaster, rather, I am a Food Scientist, which means I am an engineer that happens to brew beer.

The proposed plan is an admirable engineering and administrative plan. The engineers and scientists at both DEM and GZA involved in this plan have deftly crafted a plan to satisfy all of the local, state, and federal government stipulations, however it seems as if the plan lacks foresight in planning for a seemingly inevitable and definitely disastrous occurrence, that being simply a migration of contaminants in the old landfill for any reason which could occur at any time and is more likely to occur the more the site is disturbed and modified.

The facts that I have come to understand are that:

1. The Jamestown Landfill is NOT properly closed
2. EPA exempted the site from the NPL list due to funds making the site a state (RI) responsibility
2. DEM desires to use an EPA exception to circumvent normal CERCLIS landfill closure
3. Contaminants HAVE been found in monitoring wells on the site
4. The current plan involves disturbing CONTAMINATED soil
5. The current plan involves changing the surface water FLOW and groundwater RECHARGE
6. The current plan involves NO CONTINGENCY FOR either prevention of, identification of, or treatment of contaminating surrounding PRIVATE wells
7. The current plan involves NO CONTINGENCY FOR backup water supply to citizens using private wells
8. Current "brown-field" procedures involve finding uses for sites that have been PROPERLY REMEDIATED
9. There is at least one well immediately adjacent to the site that has a CONTAMINATED WELL

In closing, I would like to you to understand that I am not just some "nervous nelly, tree hugger, environmental extremist, or malcontent," rather, I am someone who was brought up with a respect for the environment, an education with a background in science sufficient to

understand the relevant research studies and engineering designs, and the compassion and responsibility to understand the importance of stewardship of our natural resources for the generations to come. I do hope that you will hear my call to re-examine this proposal in terms of the inherent risks to public safety, environmental quality, and exposure to liability that this plan would bring and has no contingency plan for. I don't take lightly risks that are either real or "perceived" as put to us by GZA. This plan and the controversy that has come to surround it should serve as a wakeup call for the citizens of Jamestown to stand up for what they say they believe in.

Thank you for your time,

Kurt D Musselman
400 Felucca Ave
Jamestown, RI

Mr. Chris Walusiak
R. I, Department of Environmental Management
Office of Waste Management
235 Promenard St.
Providence, R. R, 03908

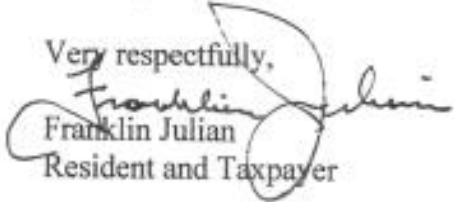
Dear Mr. Walusiak:

We are the people who are likely to be impacted by locating the Jamestown Highway Barn over the old Jamestown land fill. Studies have indicated that if that is done wells will be contaminated!

57 % of us on Jamestown depend wells to give us water .We should not be exposed to the chance of more contamination. Why take the risk? Locate the barn at Fort Getty there is plenty of clean areas the that could take the barn with NO risk.

Please give this your attention – Thank you.

Very respectfully,


Franklin Julian
Resident and Taxpayer

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D.E.M. / O.W.M.

2006 FEB 10 P 2:09

John McCray

Jamestown 50% Design
Public Comment# 39
John McCray

U.E.M. / U.W.M.

2006 FEB 10 P 12:59

February 8, 2006

Mr. Chris Walusiak
RI Dept. of Environmental Management
Office of Waste Management
235 Promenade Street
Providence, RI 02908

Dear Mr. Walusiak,

As a resident of Jamestown's north end who's property is very close to the CERCLIS landfill, I am deeply concerned about the egregious procedures that are leading the town to proceed with a project that has a dangerous possibility of polluting the numerous wells in the area.

A proper hydrogeologic study was not done prior to the decision to locate the highway barn on this fragile location—and should be! If the project goes forward without a full study and contaminants then pollute our wells, I can assure you that the legal ramifications to the town and to the state agencies involved will be huge, and the clean-up could be monstrous!

The previous partial studies of the Viera Farm wells that showed carcinogens in 1987 and 1992 should have mandated further study in 2006. Strangely, this has not happened—and should!

The delicate state of the ground on and around the landfill, mandates a proper analysis of our fractured bedrock before this dangerous project goes forward, and RI DEM's Office of Waste Management should be leading the charge! Please do not let the possibility of this danger escalate without proper and complete analysis of this known hazardous waste-site.

Sincerely,

John McCray

February 9, 2006

Mr. Chris Walusiak
Rhode Island Department of Environmental Management
Office of Waste Management
235 Promenade Street
Providence, Rhode Island 02908

Dear Mr. Walusiak:

I attended the February 1, 2006 hearing on the Jamestown landfill closure plan that incorporates building the town highway barn on the property. After listening carefully to the presentations, I must say I am impressed with the thoroughness of the plan to

- excavate and evaluate the material buried in the landfill,
- change grade of the land so the excess water runoff from land east of the landfill will go onto the land outside the landfill
- improve drainage with vortex separators to keep gasoline out of the storm water going into the wetlands across the street and elsewhere on the site
- Improve the entrance and roads (to reduce vehicle fluids flowing onto the land)
- finally build a highway barn in Jamestown!

Unfortunately, I was disappointed by what appeared to be an attempt by those who do not support the plan to silence other members of the audience. For example, they procured the services of a stenographer to record the meeting, yet they surely must know that such a transcript would not be admissible in court (because none of the speakers were under oath). They also videotaped the meeting and chose to edit the tape and air it on their website; yet the edited tape does not reflect what was said, but does ridicule others who spoke at the meeting (and who do not share their point of view).

I support the closure plan because it is well-thought out and will result in a cleaner site. Certainly it is time to cap and close the landfill, and time to build the highway barn.

Sincerely,

Carol Nelson-Lee
23 Buoy Street
Jamestown, Rhode island 02835

Jamestown 50% Design
Public Comment# 41
James Cardi M.D.

James K. Cardi, M.D.
1181 North Main Road
Jamestown, RI 02835
(401) 423-3549

Mr. Chris Walusiak
R.I. DEM Office of Waste Management
235 Promenade St.
Providence, R.I. 02908

February 9, 2006

RE: Jamestown Landfill

Dear Mr. Walusiak,

First and foremost I hope that you now know this is NOT a 'NIMBY' issue. The bottom line is that there are over 400 wells on the North End of Jamestown whose aquifer lies beneath the old Landfill. The town will not be able to supply municipal water to us simply because there is not enough water available. We are all in favor of properly closing the site, what bothers me and others here is the method of closure (i.e. digging up/disturbing what is there vs. simply capping it and leaving it alone), and if that wasn't potentially dangerous enough, the town then wants to build an industrial type site above it.

Please ask yourself the following as we have not been able to get straight answers:

- 1) How many landfills in R.I. have been closed in this manner, i.e. excavated?
- 2) How many of those have had industrial-type sites built above them?
- 3) How many of either were in a residential area where the only source of water is well water?

Ms. Grandchamp made a comment at the recent town meeting that this was one of the more benign landfills in R.I. Based on what? The reality is that no one knows what's in there, all the more reason to leave it alone.

I simply do not understand why this is even being contemplated. Who is going to pay for the monitoring of our wells? If pollutants are found, who pays for the investigation?

SEP 10/ 1988 15:02 4 3420303 PAGE 02/02

James K. Cardi, M.D.
1181 North Main Road
Jamestown, RI 02835
(401) 423-3549

What happens in the meantime, i.e. where do we live, bathe, drink etc.? Who would pay for the hyper-expensive filtering systems and the ongoing monitoring and maintenance? And what happens to the equity in my home when its value is now zero? Who compensates us for that? All of this pales in comparison to the health risks. If your town wanted to do this in your neighborhood, what would your thoughts be? Honestly, if the town could supply me with municipal water they could build an airport there for all I care, but the simple fact is: if our wells become polluted, it is not physically possible for the town to get us water because the supply does not exist.

Sincerely,

James K. Cardi M.D.

Jamestown 50% Design
Public Comment# 42
Dennis Webster

Dennis H. Webster
8 Mount Hope Avenue
Jamestown, RI 02835

February 10, 2006

Mr. Chris Walusiak
Rhode Island Department of Environmental Management
Office of Waste Management
235 Promenade Street
Providence, RI 02908

Dear Mr. Walusiak:

In 1998 the town proposed building the highway garage on lot 47, east of the landfill. The North End Concerned Citizens (NECC) objected on numerous grounds, one being concern for groundwater contamination. The Town Council agreed to their request to have an expert evaluate this perceived threat, and that led to GZA's multi-year groundwater monitoring study and Jamestown's voluntary participation in the landfill remediation program. Thus, in the minds of many residents, landfill remediation and the highway garage are closely linked.

My understanding from attending your February 1 workshop is that the result of GZA's study is good news: The landfill can be remediated at a reasonable cost and the remediated landfill can accommodate the garage and other highway department uses without increasing the threat to the groundwater.

Not everyone in town understands that the remediated landfill will provide the same level of protection for groundwater with or without the garage. There is an organized effort to convince residents that the garage will threaten the water - see the attached clipping from the February 2 Jamestown Press titled "Island citizens group gives well-water talk."

Unless new evidence demonstrates a real threat to the groundwater from the garage, I urge you to approve the 50% design and include in your approval a clear, unequivocal explanation of why the highway garage will not threaten the groundwater. Clearly informing the public of the reasons for your decision will help alleviate the unfounded anxiety some residents are feeling about their well water and reduce the divisiveness this issue is causing within the town.

Sincerely,


Dennis H. Webster

February 9, 2006

Mr. Chris Walusiak
Rhode Island Department of Environmental Management
Office of Waste Management
235 Promenade Street
Providence, RI 02908

Dear Mr. Walusiak,

I support the proposed Jamestown landfill remediation project which includes reuse of the landfill for the highway garage and related facilities. I am unaware of any scientific reason that this project should not go forward at this site. Clearly, there is local opposition to the construction of the highway barn, but I have not heard a substantiated argument against the project – despite the many years this has been under consideration.

Sincerely,



Quentin Anthony
105 Bay View Drive
Jamestown, RI 02835

RECEIVED
D.E.M. / O.W.M.
2006 FEB 10 P 2:16

RECEIVED
D.E.M. / O.W.M.

2006 FEB 10 P 2: 14

Chris Walusiak
RI Department of Environmental Management
Office of Waste Management
235 Promenade St.
Providence, RI 02908

Dear Mr. Walusiak

We are writing to voice our concern about the construction of the Jamestown highway barn on what was once the Jamestown landfill. This lengthy debate has become a battle of the data between the concerned citizens of Jamestown and the GZA engineering firm. Without becoming entangled in that battle, we would like to state our opinion, one of basic common sense. Let us be safe and cautious by capping the landfill, following Federal and State regulations, and just walk away. Let us not tamper with the fragile integrity of our water system. Disturbing contaminated soil so close to our wetlands seems to be an act of recklessness. We islanders have but one aquifer to provide our drinking water. If it becomes polluted, where will we turn? More than half of our residents depend on wells for their water. We have no backup system. We must not gamble with the health of our island. We have only one responsible course of action - to err on the side of caution and not put our residents in harms way.

Respectfully submitted,

Susan and Abbott Gregerman
34 Capstan Street
Jamestown, RI 02835

Chris Walusiak
RI DEM Office of Waste Management
235 Promenade St.
Providence, RI

February 10, 2006

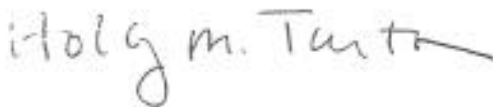
RECEIVED
D.E.M./O.W.M.

2006 FEB 10 P 4: 14

Dear Mr Walusiak,

As a resident of Jamestown, I wish to comment on your plans for the Jamestown landfill and siting of the proposed town highway barn. I agree that the issue of siting of the town highway barn and the possible mitigation of any groundwater hazards are unrelated. A few people who reside in the area near the landfill have voiced concerns about possible pollution from the construction and use of a part of the area for the highway barn. I believe these concerns are without merit, and their issues can be rectified by proper construction and storage practices. Therefore I ask that any plan you propose allow for the siting of the town highway barn at the landfill location.

Sincerely yours,



Holly Turton
85 Clinton Ave.
Jamestown, RI 02835

Marcie Lindsay 2/8/06



Philip E Lindsay
18 Constellation Ct
Jamestown, RI 02835

Mr. Walusinski -

We are troubled by the effort
to put pressure on those of us in North
End of Jamestown who rely on ~~ground~~
water by placing an ~~active~~ higher ~~as~~
barn (and surely more industrial uses)
on the former landfill and now

transfer station in Jonestown, RT.

Please err on the side of caution
and let this site be closed to any
development. ~~Because~~ There is no clear
a record that this will become a problem
for residents in the area.

We appreciate your consideration

2006 FEB 10 P 1:29

Sincerely
D.E.M. / O.W.M.
RECEIVED

Maria C. Sig

February 8, 2006

REC.
D.E.M. / O.W.M.

Mr. Chris Walusiak
Rhode Island Department of Environmental Management
Office of Waste Management
235 Promenade Street
Providence, RI 02908

2006 FEB 10 P 12:59

Dear Mr. Walusiak,

As an abutting neighbor, I have several comments regarding the Remedial Action Work Plan and 50% Design for the former Jamestown Landfill submitted by GZA GeoEnvironmental, Inc. on behalf of the Town of Jamestown in December, 2005.

First, let me review some of the context for these comments.

- My well is my family's sole source for water. My children drink it and bathe in it. We water our vegetable garden with this water. We reside outside the boundaries of the municipal water supply.
- Jamestown's underlying geology is fractured bedrock. While immediate sub-surface flow may be inferred by water table gradient, bedrock flow may be contrary to above-bedrock flow. The actual regional geology has not been adequately characterized.
- Jamestown has a long history of violations at the landfill site after closure as a dump. Many of these violations would have never been noted if not for the diligence of neighbors.

Any plan must include mandatory provisions for supply of water to any adversely affected residents. This "what if" component has not been addressed in any part by the proposal. Clearly, the Town of Jamestown plans to contest any claims made against it when wells are polluted. Not having any contingency plans to supply water will only harden the town's reliance on denial.

It was revealed during the question and answer period on February 1, but not during GZA's presentation, that the town is seeking several variances from landfill closure regulations. Under no circumstances should any variances be granted. Minimum cap coverage and unpaved traffic-bearing surfaces should not be allowed. Neighbors deserve the best protection, not shortcuts that compromise their safety. No variations from remediation standards should be granted.

Wells internal to the waste boundary must be sampled in the long-term monitoring program. Knowledge of which contaminants are present in the landfill will inform investigators and regulators as to potential and imminent dangers.

It is abundantly clear that the inclusion of a 1-acre materials storage area on the upper plateau is an extension of the closure project beyond the requirements for closure. The surface will overly a geologically unstable waste pile which is presumed to contain toxic chemicals. Inevitable cracks in this surface, the result of burdening by heavy machinery, will channel surface water into the waste layer. Since this surface will be covered in some locations for extended periods, thorough and regular inspection for faults will be impossible. Examination of the cracks in the floor of the existing sheds on the plateau shows many cracks in the concrete. Considering the town's tendency to ignore infrastructure maintenance as well as a demonstrated predisposition to incur use violations, this storage area is a disaster waiting to happen.

I also question the inclusion of Summit Ave and Lot 47 into the design solution. At the meeting for the first 30% design plan at the Jamestown police station on February 11, 2004, Ms. Grandchamp of your office explicitly stated that both parcels were outside the scope of the landfill project and therefore beyond her jurisdiction. Why are both parcels now included in the remediation plan? Certainly a municipal water well and a water drainage sump are roles that should be considered part of the landfill project and cannot be exported to adjacent properties. Aside from these concerns, the wholesale flushing of Lot 47 close to the abandoned municipal septic disposal field is risky at best.

Although approved in concept in the 30% design, the Town of Jamestown should not be permitted to include a highway barn facility on-site. Such an extension would:

- Increase surface runoff
- Threaten underlying waste integrity during excavation and installation
- Threaten buried containers by continued heavy machinery traffic

Prudent and balanced evaluation of this proposal reveals many flaws and unnecessary dangers. I strongly urge you to reject this proposal.

If you have any questions regarding this letter, please contact me at 401-832-4105.

Thank you,



Daniel O'Neill
33 Summit Ave.
Jamestown, RI 02835

Cc:

Senator Jack Reed
Senator Lincoln D. Chafee
Representative Patrick J. Kennedy
Governor Donald L. Carcieri
Lieutenant Governor Charles J. Fogarty
Attorney General Patrick C. Lynch
State Senate Majority Leader M. Teresa Paiva-Weed
State Representative Bruce J. Long
W. Michael Sullivan, Director, RIDEM
Angelo S. Liberti, Chief, Surface Water Protection, RIDEM
Jay Manning, Principal Engineer, Division of Water Resources, RIDEM
David R. Gifford, M.D., MPH, Director, Rhode Island Department of Health
Robert Vanderslice, PhD, Chief, Risk Assessment, Environmental Health, RI Department of Health
David B. Van Slyke, Preti Flaherty LLP

Jamestown 50% Design
Public Comment# 48
Joe Loitherstein, P.E.,
Loetherstein Environmental



45 Beulah Street
Framingham, MA 01701-5243

(508) 872-6400
FAX: (508) 872-6466

FAX COVER SHEET

Date: February 10, 2006

To: Mr. Chris Walusiak

Company: Rhode Island Department of Environmental Management

Fax: 401-222-3812

From: Christine M. Ferretti

RE: Jamestown Landfill
Jamestown, Massachusetts

Total Pages: 3

Mr. Walusiak:

Following is a Summary of Assessment activities for above-referenced location. Please do not hesitate to call if you have any questions or require further information. Thank you.



Loitherstein
ENVIRONMENTAL
ENGINEERING

45 Beulah Street, Framingham, MA 01701-5243

(508) 872-6400 FAX (508) 872-6466

www.loitherstein.com

February 9, 2006
Project No. 26015

Mr. Chris Walusiak
Rhode Island Department of Environmental Management
Office of Waste Management
235 Promenade Street
Providence, RI 02908

Subject: Passives Soil Gas Analyses
Jamestown Landfill
Jamestown, Massachusetts

Dear Mr. Walusiak:

At the request of the North End Concerned Citizens (NECC) of Jamestown, Rhode Island, Loitherstein Environmental Engineering, Inc. (LEEI) is pleased to submit this summary of assessment activities that we recommend be performed at and in the vicinity of the Jamestown, Rhode Island landfill. From our discussions with representatives of NECC and review of information that they made available to us, it is our opinion that adequate characterization of the contamination at the landfill and vicinity has not been performed. Therefore, it is our opinion that further assessment is necessary to evaluate the extent of chlorinated volatile organic compounds and other contaminants that have been detected at and near the landfill.

As a first step, we recommend that a passive soil gas survey be performed to provide information on the source nature and extent of the CVOCs and other volatile compounds that may be present. Passive soil gas sampling and screening technology utilizes tubes containing an adsorbent material, placed in a matrix near the surface. As contaminants in the soil and groundwater evaporate, gases are sorbed onto the material. Passive soil gas samplers typically consist of two ferromagnetic wire collectors coated with an activated carbon sorbent housed in a small glass tube. The tubes are usually laid out in a predetermined grid, installed about 18 inches below the surface and left in place for a week to ten days. The time period for screening depends on the volatility of the contaminant, the depth of the suspected contaminant, and soil density. Minute quantities of soil gases sorb to the carbon and the wire collectors. The tubes are then shipped to a laboratory for mass spectrometry analysis. As previously stated, the tubes act as a screening device for volatile contamination of soil and groundwater.

The data from the soil gas samplers are reported in nanograms of ions and are plotting as colored plumes. The plots show potential sources as well as the extent of the contaminants that may be present at the site and vicinity. We would be please to discuss results of numerous other sites where we have used this technology should you so desire.

Given the size of the landfill and the potentially affected area around it, it is the opinion of LEEI that up to 100 soil gas samplers will be required within the landfill and the surrounding neighborhood including the wetland areas. The samplers will be left in the ground for a period



Jamestown Landfill; Jamestown, Massachusetts

February 9, 2006

Page 2


of approximately two weeks. After this period, the samplers will be retrieved and submitted for laboratory analyses for volatile organic compounds (VOCs) by EPA Method 8021B and petroleum hydrocarbons (PHCs) by EPA Method 8015.

The estimated cost for these services would be on the order of \$35,000. Following our evaluation of the data, it may then be necessary to install additional monitoring wells to confirm the results of the soil gas. It has been our experience that performing the soil gas analyses prior to drilling allows a much more targeted drilling program thereby saving drilling costs and improving site characterization, especially at large sites with CVOCs where the cost to drill numerous deep wells could be prohibitive.

Please feel free to contact me if you have any questions or require further information.

Sincerely,

LOITHERSTEIN ENVIRONMENTAL ENGINEERING, INC.


Joe S. Loitherstein, PE, LSP
President

February 9, 2006

Mr. & Mrs. Saverio Rebecchi
13 Sail Street
Jamestown, RI 02835

Mr. Chris Walusiak
Rhode Island DEM
Office of Waste Management
235 Promenade Street
Providence, RI 02908

F.
MR. CHRIS WALUSIAK
RE: Jamestown
LANDFILL

Dear Mr. Walusiak:

We are writing to you concerning the plan to allow the construction and use of a DPW Facility at the former Jamestown Landfill.

Although our home is just over two miles from the Landfill, we strongly urge DEM to "STOP THIS MADDNESS!" and protect the 1,000 homes within the threat zone of the Landfill.

Since purchasing our home in the Shores five years ago we have become acutely aware of the threats to our "sole source bedrock aquifer". During this time we have seen the Town implement a Waste Water Protection ordinance and a High Groundwater Table ordinance to protect the groundwater in the Shores from impacts, due to the concentration of homes and the nature of the bedrock water supply.

As a former president to the Jamestown Shores Association, my wife and I have been exposed to engineering reports that clearly indicate the groundwater linkage of the entire north end of Jamestown which, I'm sure you are aware, supplies water for the entire Island population.

Here is a quote from the 2003 Water Study Commission's report which points out that the fracture lines run North from the Landfill location to the South where the Shores and the Town Water system wells are located:

"Two geologic factors are likely to influence the yield of wells drilled in bedrock: the orientation of the layers or beds of rock strata, and the distribution of faults and fractures. The layers of Pennsylvanian rocks, which make up the north half of the island, form a broad basin, with a long axis trending approximately north-south."

Although, we understand that over time the unknown contaminants in the Landfill will release into the groundwater, we believe that it is best to delay that from happening as long as possible rather than risk accelerating the process through day to day industrial activity.

We have several more concerns that others have probably communicated to you in more detail however, we feel obligated to summarize them for the record:

1) In 1987, the town issued an emergency ordinance to prevent new development within 1,000 feet from the borders of the landfill. In that OFFICIAL document they listed all the reasons it was issued. Two statements stand out in our mind and highlight our concerns:

"Whereas, the use of the aforesaid property as a landfill commenced in or about 1948 and terminated in 1986: and Whereas, **there was little or no regulation and/or control** regarding the quantity or type of materials deposited at the aforesaid site during its operation as a landfill;"

"Whereas, the Board of Water and Sewer Commissioners of the Town of Jamestown **has no plans or capacity to extend the municipal water system..**"

2) In 1986 and 1992 contaminants were discovered in Test wells on property adjacent to and just south of the Landfill. GZA Environmental determined, while working for a different client, that the source of those contaminants including VOC's was the Jamestown Landfill.

Now that GZA represents the Town, they refuse to re-test those same wells to backup their claim that the Landfill is getting safer.

We have seen evidence that GZA lied to the Town regarding access to those wells, when in truth, they met with the owners of the property where the 6 test wells are and told them "the wells did not meet the needs of their analytical process." Please check out: www.northendcc.org/caught_on_tape.htm.

GZA is an important part of this process and as far as we are concerned, the "Public Trust" has been violated.

3) Laurie Grandchamp's attempt to minimize the risks by saying that our Landfill is the "most benign in the state" is;

1) Out of line for a person who claims to be making an objective determination of the proposal.

2) Basing her opinion on information provided by a firm that has proven to us, is not trustworthy and adjusts their analysis to suit the client's needs.

In answer to here biased statement we say to her;

"A MINE FIELD IS STILL A MINE FIELD! THE FACT THAT THERE ARE LESS MINES in our FIELD, DOES NOT MAKE IT LESS DANGEROUS!

THE PROBLEM WITH THE "CONTAMINATED" MINES THAT ARE

BURIED IN A LANDFILL ON A BEDROCK ACQUAFER IS... when the above ground activity triggers them to **explode** and release their poisons, the people being harmed can be miles away.

4) The suggestion, that if a well becomes contaminated there are all types of filters that can be installed to clean the water, gives us no comfort. Unless a person tests their well every day, someone would have to get sick before contaminants are detected and filters put on.

5) The maintenance history of the Town's DPW department is very poor as is evident by the condition of existing DPW locations. The remediation plan relies on regular maintenance of catch basins, filters, impervious caps etc. We do not feel safe relying on the DPW staff for those tasks.

6) The numerous violations by the Town at the Landfill over the past several years add to our concerns with proper and safe maintenance.

7) **This is not a last resort location; there are dozens of other lots to build this facility on.** The choice is just a matter of putting it "out of sight" for aesthetic purposes.

Those in favor of putting the DPW Garage up on the northern most tip of this beautiful island are of the same mindset that voted to put an "oil refinery" up there 20 years ago. It would have been right in the middle of Narragansett Bay.

8) We are a sole source aquifer!

We are a sole source aquifer!

We are a sole source aquifer!

Enough said.

Thank you for reviewing our reasons for not wanting the proposal to go forward.

Sincerely,

Saverio & Cheryl Rebecchi

W. Bruce Turner
1185 North Main Road
Jamestown, RI 02818
February 9, 2006

D.E.M. 7 0.W.M.
2006 FEB 10 P 1: 56

Mr. Chris Walusiak
Rhode Island Department of Environmental Management
Office of Waste Management
235 Promenade Street
Providence, R.I. 02908
Fax Number (401) 222-3812

RE: Jamestown Landfill Closure 50% Design

Dear Mr. Walusiak:

My wife and I are new residents to Jamestown. I am very concerned with the plan the Town is pursuing to remediate the former Jamestown Landfill. I do not believe the Town or its' consultants, GZA, have adequately studied the risks associated with locating a DPW highway barn and all its' associated activities on this site. It concerns me that the Town even uses the site as a transfer station for its garbage and storage of all sorts of town materials.

I'm sure you will receive a full report outlining the numerous inadequacies of the current 50% design from the professional attorneys and consultants that residents have hired to help them understand the dangers of the proposed plan. I hope you will listen to these concerns and incorporate their recommendations into your report.

Jamestown is such a wonderful island community. Our new home, like the majority of residents on Jamestown, is dependent on private well water. I am asking RIDEM to impose the strictest standards for remediation of this former landfill. Water is a precious resource and it needs the highest level of protection. I respectfully request you reject the proposed plan and instead require the landfill to be completely remediated. If this land is reused at all, I believe passive recreational use is the only alternative.

Sincerely,



W. Bruce Turner
(401) 392-7700

Jamestown 50% Design
Public Comment# 51
Darcy Magratten

Post-it* Fax Note 7671		Date 2/10/06	# of pages 1
To: Mr. Chris Walusiak		From: D. Magratten	
Co./Dept: RI/Env. Mgt		Co.	
Phone #		Phone # 401.423.3555	
Fax # 401-222-3812		Fax #	

February 9, 2006

Mr. Chris Walusiak
Rhode Island Department of Environmental Management
Office of Waste Management
235 Promenade Street
Providence, RI 02908

Dear Mr. Walusiak:

I would like to voice my approval of the proposed Jamestown landfill project, including reuse of the landfill for the proposed highway barn. Numerous committees composed of both professionals and lay people have come to the same conclusion, (over and over again) that this is the most appropriate site. I understand the concerns of north end neighbors with potential well water contamination and feel that, in light of their vigilance, there will be constant monitoring to ensure that their concerns do not become realities.

I urge DEM to consider the wishes of the majority of Jamestown residents and help us get on with a most needed project.

Sincerely,

Darcy Magratten

Darcy Magratten
100 Clinton Avenue
Jamestown, RI 02835

Jamestown 50% Design
Public Comment# 52
James Estes

Mr. Chris Walusiak
RIDEM
Office of Waste Management
235 Promenade St.
Providence, RI 02908

Dear Mr. Walusiak,

I am writing to voice my support of the Jamestown landfill remediation project and the use of the landfill site for the Jamestown Highway Barn. A majority of the islanders want to see the barn at the north end site and keeping the highway barn in the project will help insure funding for the remediation of the site.

I hope you will approve the combined landfill remediation/highway barn project as presented at the February 1st workshop.

Sincerely,



James Estes
100 Clinton Avenue
Jamestown, RI

Mr. Chris Walusiak
Rhode Island DEM
Office of Waste Management
235 Promenade Street
Providence, RI 02908
By FAX: 401-222-3812

William W. Karl
1 Ranger Court
Jamestown, RI
02835
Phone: (401) 423-3907

February 10, 2006

Mr. Chris Walusiak,

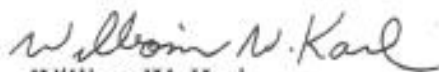
I am opposed to locating the Jamestown Highway Garage on the town landfill site for the following reasons:

We have well water and am extremely concerned about disturbing the existing landfill for fear that this will cause ground water to become contaminated by toxins released by the movement and vibrations of the contaminated earth on this site. In addition:

- 1) The contamination of hundreds of individual wells, rendering them unusable.
- 2) If contamination of wells should occur, there may be hundreds of private wells which are used until this is discovered, possibly causing more major health issues. The cancer rate in Jamestown is already higher (or the highest) than most communities in the state (I was diagnosed with prostate cancer in 2004 – town resident since 1994).
- 3) Home owner lawsuits against the town and/or the state will inevitably result.
- 4) Residents will have to rely on store bought water, until there is an alternate water source provided to homeowners.
- 5) Property values would plummet until a new permanent water source becomes available.
- 6) Water will have to be provided by the town, further lowering the reservoir levels, which are already overextended, at what could be a prohibitive cost. It is also possible that we could not obtain potable water for all islanders from the reservoir without buying water from neighboring towns or from costly alternative water supplies.

I would expect that an alternative location can be found and agreed upon which will satisfy health, safety, and quality of life issues, as well as being fiscally responsible.

Sincerely,


William W. Karl

cc: Town Council

Jamestown 50% Design
Public Comment# 54
Kathleen Karl

Mr. Chris Walusiak
Rhode Island DEM
Office of Waste Management
235 Promenade Street
Providence, RI 02908
BY FAX: 401-222-3812

Kathleen Karl
1 Ranger Court
Jamestown, RI
02835
Phone: (401) 423-3907

February 10, 2006

Mr. Chris Walusiak,

I, like my husband, am opposed to locating the Jamestown Highway Garage on the town landfill site for the a few of the following reasons:

Our own well water may certainly become contaminated as others have near the site.

Anecdotally, it is well-known in Jamestown that the cancer rate here is already much higher proportionally than in other towns and communities in Rhode Island. My husband has developed a virulent form of cancer in spite of our precautions to prevent radon from permeating the house and in spite of no known genetic factors. What caused his cancer? Could the site already have poisoned the air and water in ways we are still technologically unable to detect? Even his oncologist at Dana Farber is wondering.

Wouldn't it be prudent to resolve the "highway barn" issue by choosing a location that would not create a target for those on the island who develop cancer and/or whose wells are made unusable after the landfill site is disturbed? As an attorney, I assure you that there will always be an enterprising attorney who is willing to take on a case and sue the town for damages. Without even knowing how it would turn out, there is no question as to the financial cost to Jamestown just to defend the town. Perhaps an analysis of risk (as is done in business) might help to evaluate the potential costs. I expect that you would advise the town council of these issues as part of due diligence on the DEM's part.

Enough has been discussed and debated about the other potential losses and lawsuits. My sincere concern has always been and continues to be the health of all on our lovely island. Why place the families in our town in a position that is so unknowable and so potentially devastating. How much less costly to the town will the highway barn be, built on the landfill site, after all the financial risks are calculated? In fact, a great deal higher than has been presumed, based on my experience in life and in the practice of law.

Sincerely,



Kathleen Karl

cc: Town Council

Jamestown 50% Design
Public Comment# 55
Gloria Kurz

KURZ
ONE AQUIDNECK COURT
JAMESTOWN, RHODE ISLAND 02835

RECEIVED
D.E.M. / O.W.M.

2006 FEB 10 P 1:54

VIA FAX (401-222-3812)

February 10, 2006

Mr. Chris Walusiak
RI Department of Environmental Management
Office of Waste Management
235 Promenade Street
Providence, Rhode Island 02908

Dear Mr. Walusiak:

I am a Jamestown homeowner who lives on the northeast end of the Island. I am solely dependent on well water to service the drinking water requirements of my home.

I am writing this letter to object to the Highway design process as it relates to ongoing attempts to locate it at the north end of the Island in an area that has historically been determined to have significant risk associated with it.

There is a strong body of evidence available that supports the need for a hydrogeologic study before proceeding further.

I urge you to ensure that a thorough risk analysis be completed prior to any further consideration of this site.

Sincerely,


Gloria J. Kurz

Susan R. Little
1185 North Main Road
Jamestown, RI 02818
February 8, 2006

D.E.M. / O.W.M.

2006 FEB 10 P 1:56

Mr. Chris Walusiak
Rhode Island Department of Environmental Management
Office of Waste Management
235 Promenade Street
Providence, R.I. 02908
Fax Number (401) 222-3812

RE: Jamestown Landfill Closure 50% Design

Dear Mr. Walusiak:

I am writing you with my concerns regarding the Jamestown Landfill Closure 50% Design that has been submitted to you for review. As an introduction, I would like to remind you that Jamestown is a sole source aquifer. About 57% of the island and everyone that lives north of Zeek's Creek is dependent on private well water. The Town of Jamestown has no ability in the near term to supply residents with water if our wells should be polluted.

I am asking you to not direct closure restrictions based on the minimal standards of the regulations. I am asking you to look at this site for what it is an island with a sole source aquifer where all our water comes from rain. Do not grant any variances, as we heard Laurie Grandchamp state that she was willing to do in the case of the landfill cap requirements. Instead require the closure plan to include the maximum restrictions.

Here is a list of some of the items in the closure plan that I find particularly troubling. I am not a scientist, so I may get some of these terms wrong, but I think you will understand.

1. The plan calls for a minimal penetrating layer of cover over the waste. That means to me that more water can then penetrate through the waste. We need a cap that will allow no water to penetrate through the waste. It should be the required 2 feet of clay and then 2 feet of soil or the impermeable plastic covered with 2 feet of soil.
2. All the soil and garbage that is excavated should be removed from the site. The testing that GZA is proposing is insufficient to detect heavy metals, which is what has been detected very frequently at the site in high levels. The screening process is insufficient and could lead to contaminated waste being used as the 2 feet of cover material. This cover material should be clean soil with no possibility of

having contaminants. Additionally, you should require that excavation only be done when the wind is less than 5 or 10 miles per hour, or whatever wind speed insures that the dust from the excavation does not blow onto abutters' property. There are dangerous contaminants in the soil that children (or adults for that matter) shouldn't breathe.

3. Any area that could possibly have heavy equipment traveling over it or backhoes moving material around it including all roadways and the composting areas should be paved. There are not enough safeguards to insure this activity won't expose waste. Also, an aggressive monitoring program should be designed by your department that would inspect all areas of compliance. The vast majority of the violations documented by your department have been a result of complaints from neighbors. The Town of Jamestown has a documented history of ignoring your regulations.
4. I am very concerned about the amount of storm water that could be discharged into our wetlands. Those wetlands are private property and form a recharge area for the wells in the area. It is very disturbing that GZA's plan includes installation of two 18" pipes under the road. I understand that a certain amount of water needs to flow from the wetlands on the east side of North Road to the west side of North Road, but NOT potentially contaminated water from the landfill.
5. GZA has proposed these 2 large catch basins. One would be located at the northwest corner of the property just north of the entrance to the landfill. They state that there is no waste in that area. I don't believe that. The very nature of a landfill is to use all the property to store waste at one time or another and this landfill was in operation for more than 50 years. There is no liner or impenetrable barrier for this catch basin. Plus I don't think this basin is large enough to hold the amount of water that is currently traveling across the road. If you are going to add water from landfill runoff, at least require that this catch basin be much larger and have filtration systems that would hold the silt. The catch basin on the north east corner of the property has similar issues and I believe an even higher probability that trash is under that area.

If RIDEM plans to allow the construction of an industrial facility on top of this landfill, then it is your responsibility to make recommendations that will help safeguard our drinking water. I believe you should consider the directives.

I believe the Site Investigation Report was inadequate, particularly in light that after it was completed the highway barn construction was added to the remediation plan. A more comprehensive Site Investigation Report is necessary.

We need the maximum level of remediation of this site given our dependency on private well water. Please grant NO VARIANCES.

We need a more stringent well monitoring program. We need more test wells, cluster wells, and more frequent testing, particularly during the remediation phase and for at least a year after remediation is completed to be sure this activity has not impacted the water supply. The monitoring of wells at this site should be into perpetuity.

We need RIDEM monitoring of maintenance for all the complicated systems GZA is recommending in order to make this project work. Who is going to be sure the filters are replaced and all the protective measures are done?

It is incomprehensible to me that Town officials would recklessly endanger the health, safety and well being of any of its residents and I believe this plan could do just that. I would like RIDEM to stop this project. If you are unwilling to do that then at least require the most stringent safeguards and demand a maximum remediation plan.

Respectfully,


Susan R. Little
(401) 219-1064

Susan R. Little
1185 North Main Road
Jamestown, RI 02818
February 8, 2006

Mr. Chris Walusiak
Rhode Island Department of Environmental Management
Office of Waste Management
235 Promenade Street
Providence, R.I. 02908
Fax Number (401) 222-3812

RE: Jamestown Landfill Closure 50% Design

Dear Mr. Walusiak:

I am writing you with my concerns regarding the Jamestown Landfill Closure 50% Design that has been submitted to you for review. As an introduction, I would like to remind you that Jamestown is a sole source aquifer. About 57% of the island and everyone that lives north of Zeek's Creek is dependent on private well water. The Town of Jamestown has no ability in the near term to supply residents with water if our wells should be polluted.

I am asking you to not direct closure restrictions based on the minimal standards of the regulations. I am asking you to look at this site for what it is an island with a sole source aquifer where all our water comes from rain. Do not grant any variances, as we heard Laurie Grandchamp state that she was willing to do in the case of the landfill cap requirements. Instead require the closure plan to include the maximum restrictions.

Here is a list of some of the items in the closure plan that I find particularly troubling. I am not a scientist, so I may get some of these terms wrong, but I think you will understand.

1. The plan calls for a minimal penetrating layer of cover over the waste. That means to me that more water can then penetrate through the waste. We need a cap that will allow no water to penetrate through the waste. It should be the required 2 feet of clay and then 2 feet of soil or the impermeable plastic covered with 2 feet of soil.
2. All the soil and garbage that is excavated should be removed from the site. The testing that GZA is proposing is insufficient to detect heavy metals, which is what has been detected very frequently at the site in high levels. The screening process is insufficient and could lead to contaminated waste being used as the 2 feet of cover material. This cover material should be clean soil with no possibility of

- GZA's existing well-monitoring program and plans lack the technical rigor to properly assess the threat.

- GZA seems to downplay and/or totally ignore the probability and severity of potential off-site contamination of nearby private wells posed by the disturbance and construction upon the landfill.

- GZA seems to downplay and fails to acknowledge the significance of the fact that the aquifer under the landfill is embedded in highly fractured bedrock (with the possibility of lateral groundwater migration of, perhaps, several miles), and that this aquifer is the sole source of potable water for thousands of Jamestown's residents with private wells (as well as for municipal wells), and that there is no alternative source if the aquifer becomes contaminated.

- GZA seems to downplay the hardship and the economic impact to the Town, and to the community, of possible failure.

- GZA has concluded and stated at the workshop that, in their engineering judgment:

- The landfill is now relatively "benign" with little evidence of toxic chemical leaching.
- They do not anticipate that the planned disturbance and on-site relocation of thousands of cubic yards of landfill in order to build a PWD barn on top of the landfill would create a problem with off-site migration of toxic chemicals and metals.
- Rigorous monitoring and tracer analysis (before and after) of nearby private wells is not warranted, nor planned, because of the difficulty [according to GZA, and the President of the Town Council] of distinguishing between contamination sourced by the private property owner vs. the barn construction on top the landfill. [This appears to be a convenient and self-serving position to deflect and/or avoid responsibility and legal culpability for contamination events that may result from the Town's decision].
- Given the perceived relatively low risk, there is no need for preparing and executing contingency plans by GZA, or the Town, for the possibility that off-site well-water contamination may occur.

It is most disturbing to note that the President of the Town Council, who chaired this public comment workshop (with a notably grudging demeanor and a somewhat disdainful and undemocratic attitude towards the attendees), indicated that he is in full agreement with all of GZA's positions and conclusions in this matter. [His comments suggested pre-conceived notions and that his mind was already made up fully in favor of GZA's position).

In my opinion, GZA's engineering judgment is irresponsible and highly flawed in this matter, and lacks the requisite technical rigor, objectivity, credibility, and independence, because of the following:

- GZA's numerous instances of discrepancies and contradictory statements over the years on substantive issues regarding the threat.

- GZA's downplaying of the threat, the hazards, and the responsibility for the potential off-site contamination of an aquifer that is the sole-source supply of potable water for thousands of Jamestown families.
- GZA's marginal and/or non-compliance of RIDEM regulations in this matter.
- GZA's lack of technical independence from the pre-conceived preferences of its customer.

In view of these observations, facts and circumstances, I feel that it is vitally important to pursue an alternative course of action, as soon as possible, that is designed to properly take into consideration the health, welfare and trust of all stakeholders, as well as the entire Jamestown community. Specifically, I recommend that the Jamestown landfill remedial plans be modified to ensure the proper capping and securing of the landfill, but eliminating all plans to disturb the landfill in order to construct the PWD barn on top of the landfill. This action would eliminate the potential threat and hazards of aquifer contamination and the resulting adverse physical and economic harm to the community.

In the near-term, perhaps RIDEM and the Town of Jamestown could take genuine constructive measures to re-gain the public trust in this matter by engaging an independent third-party group of technical experts (perhaps from URI) to thoroughly review this matter, to ascertain the potential risks of aquifer contamination and groundwater migration, to ascertain the potential health and economic risks of such contamination to the nearby landowners as well as to the entire community, and to price out the cost of the various alternative courses of remedial action from this point on (without consideration of sunk costs). I suspect that the result of this independent assessment will point, unambiguously, to the need for an alternative site selection for the PWD barn, rather than by disturbing an existing toxic landfill residing on top of the community's only single-source aquifer. The prudent and responsible thing to do, for the sake of the higher good, is to err on the side of caution in this matter.

I would appreciate a response to my documented concerns at your earliest convenience.

Very respectfully,

John G. Shannon



Jamestown 50% Design
Public Comment# 57
Francis Darigan Jr.



Francis J. Darigan Jr.
604 W. Reach Dr.
Jamestown, RI 02835-2200

PROVIDENCE RI 029

08 FEB 2006 PM 3 L



Mr. Chris Walusiak
R.I. Dept. of Environmental Management
Office of Waste Management
235 Promenade St
Providence R.I. 02908

02908+5734

Richard P. Eannarino
716 East Shore Road
Jamestown, RI 02835

February 7, 2006

Mr. Chris Walusiak
RIDEM
Office of Waste Management
235 Promenade Street
Providence, RI 02908

Dear Mr. Walusiak,

I wish to elaborate on the remarks I made at the public workshop on February 1st.

I was a resident of Smithfield during the extended battle of closing the Davis dump on Log Road. I have also been associated with several construction projects, which involved trucking and hauling.

My questions are as follows:

1. What was the time and cost for RIDEM to close the Davis dump on Log Road in Smithfield? Once the wells were discovered to be contaminated, how long did it take to bring city water to these homes? (Jamestown does not have the luxury of any alternative water source). Do you have any studies on the increased cancer rate for residents on Log Road during this period?
2. What will be the additional cost over the next ten years for the extensive monitoring of technical systems proposed for the highway garage at the Jamestown landfill? i.e. underground stormwater storage pipes, pumps for septic, oil separators, gas ventilation systems, detention ponds etc?
3. What is the cost for removing all waste in the area of construction – worst case scenario?
4. William Munger testified to the type of waste discarded in the landfill, from thermometers to paint cans. What are the maintenance costs associated with heavy equipment transversing pavement covering such waste?

When all time and costs for building the highway garage and adjunct facilities on the Jamestown landfill are calculated, you may find the cost/benefit is not worth continuing the project.

Yours truly,
Richard P. Eannarino

Richard P. Eannarino

Jamestown 50% Design
Public Comment# 59
Barbara Infantoleno



The Ocean Conservancy
Advocates for Wild, Healthy Oceans

Infantolino
1141 N Main Rd
Jamestown RI 02835-2217

PROVIDENCE RI 029

08 FEB 2006 PM 2 T



DEM
Office of Waste Management
235 Promenade St
Providence, RI 02908

Attn Chris Walusiak

02908+3734 C013



So when it may concern,

I am a concerned resident of Jamestown. It has come to my attention that the town of Jamestown is making plans to build a public works barn on a polluted landfill site. This is absolutely ridiculous and defies common sense. It shows lack of concern for the citizens of Jamestown.

Please help put a stop to this madness!

Today we are aware of the dangers that can be caused by disturbing such pollution. This could possibly ruin the water supply of many or maybe all the citizens of Jamestown. What is to say that these toxins wouldn't find their way into Narragansett Bay.

Please help those in charge realize the harm they would be causing the island of Jamestown. Urge them to act responsibly by finding another site for this barn.

Thank you for any thing you can do to help the people of Jamestown save their water and their health.

Barbara Infantino

Jamestown 50% Design
Public Comment# 60
Sarah Baines

Sarah Baines
59 Intrepid Lane,
Jamestown, RI 02835

Feb 10th 2006

Mr. Chris Walusiak,
RI DEM Office Waste Management,
235 Promenade St.,
Providence RI 02908

Dear Mr. Walusiak,

I am writing to express my concern with the regards to the proposed Highway Barn being constructed on the old Landfill Site in Jamestown. I am one on the surrounding houses and rely on well water for our house's use.

I have listened carefully to the presentation of GZA GeoEnvironmental of Norwood, Ma who are the appointed consultants to the Town of Jamestown.

The first and obvious problem I had with listening to their report was that they have a financial interest in further work with the town and I would prefer that any further work of civil engineering and hydrological testing goes out to bid with other firms. I felt that GZA were complacent and did not adequately address the concerns of the surrounding neighbors, and clearly were in favor of the cheapest solution to please their customers: the Town Council.

I have seen this situation before, as I previously lived in N Falmouth on Cape Cod, where there has been enormous controversy and a very expensive clean up on contaminated underground water from the Military bases.---"The Flume". I saw the value of the houses in the path of "The Flume" plummet, and I saw the difficulty of the population owning these houses in having the situation made right with appropriate town water hookups. The situation has been of staggering expense, cleaning the sites, pumping up the water in the flume and running it through expensive filters & returning to the ground and then running water hookup to those in the path of the contaminated water.

The town has offered to test the water of a small number of very immediately surrounding houses for a number of year, but have not offered to test our wells which also are in the path of contaminated water. No doubt it would be costly and that is my point, we will have to do it. If anything should happen to our water. Filtration systems for VOCs are enormously expensive to run and the value of houses will disintegrate and we have no other savings.

There are other solutions to the positioning of the Highway Barn and I do not consider old landfills with surrounding houses as a suitable site for this town project.

Best Regards
Sarah Baines

February 8, 2006

Mr. Chris Walusiak
Rhode Island Department of Environmental Management
Office of Waste Management
235 Promenade Street
Providence, R.I. 02908

Jamestown 50% Design
Public Comment# 61
Donna O'Neill

Dear Mr. Walusiak,

I am a property owner in Jamestown and an abutter to the former Jamestown Landfill. I am writing to express grave concerns regarding the Remedial Action Work Plan and the 50% Design submitted by GZA Environmental, Inc. as consultants to the Town of Jamestown in December 2005.

My husband, two children and I rely on our well water as our sole source for drinking and bath water. We do not live within the boundaries of the municipal water supply and, in fact, it is impossible for the Town of Jamestown to provide us with municipal water with its current infrastructure.

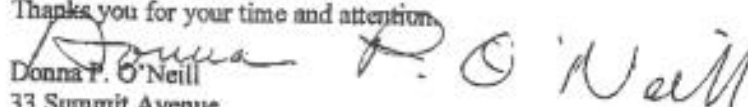
Jamestown's underlying geology is fractured bedrock. Although surface water may appear to flow in one direction (which in itself is a problem while remediating a closed landfill) bedrock flow may travel according to fracture lines. Disturbances such as excavation, heavy equipment traversing the site, and paving large areas introduce seriously potential hazardous risks to our drinking water and the health and safety of my family and the community.

The inclusion of construction of Jamestown Department of Public works facilities in the current remediation plan is totally unacceptable. There should be no building, paving, or excavating for any municipal facilities whatsoever on the closed landfill and environs, including Lot 47 and Summit Avenue. This limitation on building should include, but not be limited to, a highway garage and offices, materials storage areas, or sheds. The closed landfill should be properly remediated, capped and left undisturbed. This is the most prudent, reasonable, responsible, and in fact, only safe action.

Any remediation plan MUST include mandatory provisions for supply of water to any adversely affected residents. This contingency plan has not, to date, been addressed in any part by the current remediation plan proposal. In addition, a contingency plan should be developed as a proactive rather than a reactive strategy. In other words, the Town of Jamestown should be monitoring and protecting the health and safety of its citizens BEFORE their wells are contaminated and their children become sick.

I implore you to take a balanced and reasonable evaluation of the current remediation proposal and reject it. The first priority in the remediation plan should be to protect the health, welfare and safety of our community. The current proposal does not take this priority seriously.

Thanks you for your time and attention.


Donna P. O'Neill
33 Summit Avenue
Jamestown, R.I. 02835

Cc,
Senator Jack Reed
Senator Lincoln Chafee
Representative Patrick J. Kennedy
Governor Donald L. Caciari
Lieutenant Governor Charles J. Fogarty
Attorney General Patrick C. Lynch
State Senate Majority Leader M. Teresa Paiva-Weed
State Representative Bruce J. Long
W. Michael Sullivan, Director, RIDEM
Angelo S. Liberti, Chief, Surface Water Protection, RIDEM
Jay Manning, Principal Engineer, Division of Water Resources, RIDEM
David Gifford, M.D., MPH, Director, Rhode Island Department of Health
Robert Vanderslice, PhD, Chief, Risk Assessment, Environmental Health, RI Department of Health
David B. Van Slyke, Pretl Flaherty LLP

Melissa Mastrostefano
20 Cutter St.
Jamestown, RI 02835

To whom it concerns:

2/7/06

Please stop the building of a highway barn on top of a toxic garbage dump in Jamestown. I have a home in Jamestown near the landfill and rely on water from my well, as do all of my neighbors. We have no other possible source of water on the north end of Jamestown.

The plans to dig up and disturb the toxic waste poses a serious public health threat to all people of Jamestown but especially to people like myself who live on the north end and have no other potable water source. The town reservoir only 2 miles from the toxic landfill is also stands at risk of being polluted

*The plan to dig up the landfill will cause toxic chemicals to leach into the fractured bedrock and travel to underground water wells through the hydro-geological under structure.

*Jamestown already has a high cancer rate. Disturbing the land- fill where there was unregulated dumping for many years is unwise and will harm the environment and the public health.

*Arsenic has been found in the Jamestown Landfill well tests above 2005 Federally mandated MCL. A Virginia Tech article from November 2004 notes that arsenic is more mobile under oxygen free conditions-namely groundwater conditions. According to an article from the Journal of the American Medical Association dated December 12,2004, Arsenic ingestion from Well Water is associated with an increased risk of Lung Cancer.

*Viera Farm, next to the land- fill, has already had their wells contaminated by the landfill. A settlement was made between the farm and the town. Historically there have been numerous violations sited. The incomplete and poor care of the landfill increases the risk of future problems.

*The construction of a High Way Barn on the landfill site will pose threats to the health and safety of the employees who will be working in the barn.

*The Health of Narragansett Bay is in jeopardy for chemicals can travel through fractured bedrock zones that have a high degree of lateral groundwater migration, like that found in Jamestown.

There are many other places on the island where a highway barn can be built with out having to disturb a land- fill. The plan to build the barn on the landfill is unconscionable, technically unwise, and extremely costly and an UNACCEPTABLE HIGH RISK TO PUBLIC HEALTH.

I beg for your help to stop this process and thank you in advance for your support!

Sincerely,


Melissa Mastrostefano

To: RI DEM

Attn: Chris Walusiak

Date: February 7, 2006

Re: Jamestown Landfill Remediation Project

Dear Mr. Walusiak,

I understand that you are welcoming comment on the Jamestown Landfill Remediation Project. **I urge you to support this project.** I live in the north end of Jamestown, and my family depends on well water. I have always been worried about the possibility of water contamination from the old dump. (I remember watching people dump paint, oil, epoxy, etc. etc. for years.) I feel that the proposed project will help protect my water quality. I also feel that the Island will not take this type of action unless the Highway barn is built at this site, or active contamination requires it. Therefore, I also support the Highway Barn being built on or next to the dump site.

Jamestown, as usual, has many very vocal groups that protest all possible actions. In this we are lucky, in that we have concerned citizens that do not want to be walked on. However, we also suffer, because people become so polarized that the 'best decision' is often not made – the loudest yellers tend to drown out the more thoughtful but quieter majority. Please do not let the volume of the input overbalance the facts of the situation when considering the above proposed project.

Thank you for considering my opinion on this issue.

Sincerely,



Linda A. Scott
171 Beacon Avenue
Jamestown, RI 02835
401-423-2494

RECEIVED
JAN 17 2006

2006 FEB -9 AM 10:54

John G. Shannon
49 Columbia Lane
Jamestown, RI 02835

February 1, 2006

Mr. Chris Walusiak
Rhode Island Department of Environmental Management
Office of Waste Management
235 Promenade Street
Providence, RI 02908

Dear Mr. Walusiak,

My wife and I live at the north end of Conanicut Island (Jamestown). My property, with its private well water, is approximately 1/2 mi (direct line-of-sight) from a landfill located at the Jamestown Transfer Station. I attended the Jamestown Landfill 50% Design Review Public Comment workshop on February 1, 2006. As a follow on to my serious concerns expressed in my previous e-mail of January 26, 2006 to the members of the Jamestown Town Council (which I copied to the Director of RIDEM), I wish to formally submit my comments and concerns directly to you in this matter.

As evidenced by the numerous questions, concerns and comments directed to GZA (the environmental contractor for the Town of Jamestown) by almost all of the public speakers during the Q/A session at the workshop, the vast majority of attendees, including myself, are totally convinced that both GZA, and the President of the Town Council, are not representing the best interests of all of the stakeholders in this matter. I am specifically referring to GZA's latest landfill closure plan that has been dramatically revised to accommodate the Town's decision, in the summer of 2005, to excavate more than 10K cubic yards of toxic landfill and relocating the landfill material [preferably on-site, to minimize costs] in order to build the Town's Public Works Department "barn" on top of the closed-down landfill.

My fundamental concern is that this planned action poses the very serious risk (highly likely, but unknown in terms of probability and severity) of contaminating the underlying aquifer (the sole source of potable water for almost 60% of all Jamestown families) embedded in highly fractured bedrock (with high probability of lateral migration of groundwater), which will result in grave health and economic harm to not only the nearby residents, but also to the entire community.

Some of my most serious concerns with GZA's 50% design plans and their comments at the workshop include the following:

- GZA seems to downplay the significance and severity of several instances of contradictory reports they have made over the years with regard to the threat posed by the exceedances of toxic chemicals and metals found at the landfill.

Jamestown 50% Design
Public Comment# 65
Joan Jordan

Joan E. Jordan
211 America Way
Jamestown, RI 02835

Mr. Chris Walusiak
RI Department of Environmental Management
Office of Waste Management
235 Promenade Street
Providence, RI 02908

Dear Mr. Walusiak,

It has come to my attention that the placement of the DPW Highway Barn, on the purposed landfill site, will in all probability cause the pollutants in the landfill to contaminate the water supply the residents, me included, draw upon for daily use. You are in the unique position to approve or disapprove the continuance of the current project.

My concern is that the testing of the water was not properly completed. To ensure that the pollutants will not leach into the aquifer, the test wells at the landfill need to be pumped like normal wells.

I am requesting that you halt progress on the project until proper testing can be completed. This will ensure the safety of all the individuals who's only supply of water comes from this same aquifer. The results should be made public to all Jamestown citizens. If it proves that the pollutants will be released, then another site should be chosen.

It also is within your power to suggest another site for the highway barn. I am sure that your department is aware of the problems several other towns have had with water contaminants. It has proven to be very costly to those towns not to mention, the monetary loss to all the homeowners.

I ask that you seriously consider the concerns that I and many Jamestown residents have presented to you.

Sincerely,



Joan E. Jordan

Mr. Raymond Iannetta
1219 North Main Road
Jamestown, RI 02835

2006 FEB -9 A 11:48

February 6, 2006

Mr. Chris Walusiak
RIDEM
Office of Waste Management
235 Promenade Street
Providence, RI 02908

Dear Mr. Walusiak:

I am greatly disappointed in the way DEM appears to be conducting the requirements for closure of the Jamestown landfill.

First and foremost is my concern that the DEM is treating the Jamestown landfill closure with no attention to the *unique* fact that the Town of Jamestown will *never* be able to bring water to any resident on the north end of the island. In meetings, DEM insists upon comparing Jamestown to communities like Exeter and Hopkinton, where landfills have been closed and surrounding residents also derive water from private wells. What DEM seems to consistently miss is these communities have the ability to bring municipal water to their residents if their wells become contaminated. **This is not the case in Jamestown!** The Town of Jamestown has consistently stated, that if this should occur, it would not and could not supply water to any residence located on the north end of the island. This is also emphatically stated in the Town's comprehensive plan.

This *unique* character of Jamestown requires the DEM to install more restrictive monitoring and remediation requirements than those required where a Town could supply municipal water to private well users.

The original short and long term test protocol developed and proposed by GZA was to remediate the landfill only. The proposal to include a Highway garage upon the site was included in the 30% design phase for the first time. In its 30% design comments the DEM proposed that all soil disturbed to build the highway garage be tested and hauled off island. DEM also requested that a proposed road over the landfill and a composting area be protected with an impermeable layer, thus requiring both to be paved.

During the 50% design workshop on February 1st 2006 GZA's proposal included the following:

- A previously required impermeable paved road over the landfill to become a gravel highly permeable road.
- A previously required impermeable paved composting area to become a highly permeable gravel composting site, subject to pooling of water from constant backhoe activity.

- A reduction in the number of test wells and frequency of testing because GZA's statistical analysis has shown a level or slight downtrend in MCLs, when in fact the September 2005 Monitoring Report indicated:
 1. Eight of fifteen target inorganic analytes sampled for were detected. Two wells in particular GZ5 and GZ6 contained seven of the eight, the highest number detected this round. Why is this statically insignificant to GZA? Because the EPA has not established MCLs for all these items.
 2. Four VOC's were detected in samples from two wells down gradient of the site. Again, why is this statistically insignificant? Because the EPA has not established MCLs for two or the four VOC's detected.
 3. A statistically significant upward trend was established for cobalt in GZ5. Again there is no MCL for cobalt and Region 1 of the USEPA has not adopted risk based concentrations for Cobalt.
 4. Concentrations of Chromium increased this quarter in two of the three monitoring wells that showed detections last quarter.

A statistical analysis is required for all detected constituents observed above the EPA's maximum contaminant levels (MCLs); none is required for contaminants that the EPA has not established the maximum levels for. However, the EPA has recently voiced concern that MCLs may not be the best way to measure risk to individuals. It is currently investigating the possibility that a combination of chemicals and metals, at lower levels, may be more dangerous to human health than one chemical exceeding an MCL.

The *uniqueness* of Jamestown, no expansion of water, *ever*, and the fact that it sits upon a sole source aquifer demands placement of more restrictive, not less restrictive requirements, upon the closing of the landfill. I request that DEM deny GZA and the Town of Jamestown any relief:

- From off site disposal for *all* disturbed dirt and trash,
- For any reduction in the number and frequency of wells monitored.
- For any relief in providing an impermeable cap over the entire site.

I also request that the DEM make it a requirement, for its approval to construct a highway garage on the closed landfill, for the Town of Jamestown to post a bond sufficient to cover the cost of providing municipal water to residents surrounding the closed landfill.

The above requests are the minimum requirements to provide the surrounding residents with modest protection for their only source of drinking water.

Sincerely yours,


Raymond Iannetta

Barbara Tuthill
120 Gondola Avenue
Jamestown, RI 02835
401-423-1229

RECEIVED
D.E.M. / O.W.M.

2006 FEB 13 P 12:21

February 9, 2006

Chris Walusiak
RIDEM, Waste Management Office
235 Promenade St.
Providence, RI 02908

Dear Mr. Walusiak:

I urge you to stand up to the pressure you're getting from a vocal minority and let the town put the highway barn at the landfill. That's where most of the people of Jamestown want it and, if there's no evidence that it's going to hurt the ground water, that's where it should go.

I believe in scientific and modern engineering testing procedures that your department is using to monitor the quality of groundwater in the proposed siting of the "much needed" highway barn. Those facts, with continued monitoring, should govern the decisions on moving forward with this project, not the emotional, unsubstantiated claims of a small but vocal group of north enders.

Sincerely,



Barbara Noel Tuthill

February 5, 2006

Mr. Chris Walusiak
RI Dept. of Environmental Mgmt.
Office of Waste Mgmt.
235 Promenade St.
Providence, RI 02908

Dear Mr. Walusiak,

At last week's Council meeting we saw a first class example of a well organized, well financed, and well tutored handful of neighborhood residents control a town meeting. This NIMBY group does not represent the community interest or its strong desire to see a new DPW Barn built at the Town Landfill.

This is a small island. After 20 years of effort, it is clear that there is no site where we can put our desperately needed new facility without neighborhood opposition. Help us put it where it logically belongs. I am sure we can commit to any mitigation plan.

Had you attended last year's Annual Financial Town Meeting you would have witnessed how motivated this community is to build our new barn. Yes the handful of "Concerned Citizens" was there. But so were some 250 energized residents voting to tax themselves to fund the building's design.

We must move forward. We cannot imagine starting over.

Very truly yours,



Bob Dolan

RECEIVED
OFFICE OF ENVIRONMENTAL
MANAGEMENT
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ATTACHMENT A

RIDEM/ OFFICE OF WASTE MANAGEMENT REFERENCE GUIDE TO DEPARTMENT RESPONSES AND SUMMARY OF PUBLIC COMMENTS RECEIVED REGARDING THE REMEDIAL ACTION WORK PLAN AND 50% DESIGN DRAWINGS

FORMER JAMESTOWN LANDFILL

JANUARY 2006

Prepared June 7, 2006

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General Introduction

On February 1, 2006, Rhode Island Department of Environmental Management (the Department) Office of Waste Management (OWM) personnel attended a public workshop on the above referenced document at the request of the Town of Jamestown. Although not required by the Regulations, the Town officials offered to conduct a workshop at the 50% design phase of the Remedial Action Work Plan in order to solicit additional public input into the Remedy Design. The Town made this commitment during earlier public meeting held in 2004. The three and one half hour workshop included presentations from RIDEM and GZA, as well as, questions from Jamestown residents. The Department solicited public comments for a period ending on February 10, 2006. This response summary was prepared after a complete review of all submitted materials to provide a Department response to all substantive comments.

Public Comment Summary

During the public comment period, the Department received a number of technical and general comments from public officials, area residents, and other interested parties. Below is a listing of those citizens who provided comments with a summary of the issues raised by each. Copies of the actual comments can be viewed at the Department's Office of Waste Management, 235 Promenade Street, Providence, RI by appointment or on the Department's website at www.dem.ri.gov.

In preparation of the response to each comment, the Department grouped/categorized related comments according to the regulatory issues raised to provide a concise detailed response. Below each citizen's name, therefore, is a summary of the regulatory issues raised in the comment and a reference to the prepared responses. Form letters are listed with the names of the individuals who submitted them. The comment letters were assigned numbers randomly. For clarity in the summation, the assertions are generally listed without qualifiers such as "the commenters assert...", this is not meant to imply that the Department believes or does not believe these assertions to be factual, simply that these things were stated in the letter.

Form Letter # 1: Pump Tests

Table 1: Form Letter 1 was submitted by the following people:

#	Last Name	First Name	Additional Comments
1	Almeida	Kathleen	
2	Banks	Kathleen	I live in a neighborhood about 1/2 mile from this site. I'm frightened for all of us.
3	Del Buono	Vincent	The mistaken placement of the DPW Highway barn could possibly cause a catastrophe to our drinking water that would be impossible to rectify!
4	Gamble	Charlene	
5	Hamilton	Bruce	This area should not be disturbed-I have been coming to Jamestown for over 50 years (living here since 1978) I saw what went into the old site. Please leave it alone.
6	Harvey	Susan	Please do not allow risks to be taken with our water supply-thanks
7	Holland	Virginia	

8	Hull	Tim & Rita	We are deeply concerned for ourselves and the future of our children in regards to this matter. Please take this seriously.
9	Jepson	Steven	
10	Karon	Richard & Linda	If the DEM acts responsibly, it must guarantee and insure potable water if the project is approved.
11	Leibhauser	Maria	Chris- Please do not take risks with our much needed water supply.
12	Lepre	Marie	Please do not take risks with our water supply!
13	MacMillan	Jean	
14	Martin	David & Janice	We own Lots 248 and 249 next to the landfill & plan to build on these 2 lots.
15	Murray	Karin	We are anxiously watching and appeal to you to protect our water. We have no other water!
16	Oates	Tom & Christina	Please keep this beautiful island safe!
17	Olsen	Scott & Cindy	
18	Pennine	Andrea	We have children who drink this water! Please don't take any risks with our water supply. We depend on our clean healthy wells!
19	Petersen	Paul & Linnea	The testing is essential in ensuring our water supply would not be compromised by the proposed construction on the landfill site. Anything less would be irresponsible.
20	Pritchard	David	
21	Roony	Chris	The risk/reward of not taking the poll test is dramatic. I would expect that the risk at "water" supply to an island community warrants the added expenditure to safe guard.
22	Smith	Larry & Janet	
23	Toselli	Alfred & Anne	Please help to stop the building of the highway barn over...
24	Totten	Laura	Please protect us and our children's health!
25	Weibust	Lloyd & Beth	Please do not jeopardize our only source of water with this ill-conceived idea. It is not worth the risk.
26	Lemke	Karen & Arthur	

This letter opposes the project.

- A. Why were pump tests never done on the testing wells?
See response #7.
- B. Well sampling should only be done by pumping with conventional pumps as one does for supply wells.
See response #14.
- C. Groundwater is the only source of water in Jamestown and cleaning it up will be very costly.
See response #2.
- D. Concerned about risk of excavating this "EPA registered CERCLIS contaminated landfill".
See response #5 and 12.
- E. Additional handwritten comments nearly all address the importance of groundwater.
See response #2

Form Letter # 2: Support for the Project

Table 2: Form Letter 2 was submitted by the following people:

#	Last Name	First Name	Additional Comments
1	Amerigian	Craig	

2	Arnold	George	
3	Baker	Glone	
4	Bakios	Mary	
5	Barraette	Gerard	
6	Bellion	Gwenda	
7	Bellion	John	
8	Berglund	Virginia	
9	Blythe	Dorothy	
10	Brennan	Mary	
11	Brown	Dorothy	
12	Brownell	Katherine	
13	Bryer	Dureen	
14	Burns	Eileen	
15	Cabral	Emeline	
16	Caswell	Caroline	
17	Caswell	James	
18	Clarke	Linda	
19	Clarke	Arthur	
20	Clarke	Marian	
21	Clarke	Russell	
22	Conn	Gretchen	
23	Couture	Philip	
24	Crawford	Chris	I grew up delivering newspapers daily on the north end & live there now. The dump was perpetually on fire & I believe 90% of what was put in there was incinerated. Also, I think it hypocritical for East & West estates who have built hundreds of garages & oiled & sealed driveways to be pointing the fingers at others. Stop with the chem-something and realize that any well pollution starts at home.
25	Cunha	Helen	
26	Dolan	Andrea	
27	Dolce	Jill	
28	Dolce	David	
29	Drury	Peter	
30	Drury	Anne	
31	Dunn	Alice	
32	Dwyer	Timothy	
33	Easton	Don & Karen	
34	Feigelman	Mary	
35	Fresh	Nancy	
36	Greene	Mary	

37	Greene	Chester	
38	Greene	David	
39	Greiser	Arthur	
40	Greiser	Mary	
41	Hellewell	Victoria	
42	Hellewell	Martin	
43	Hellewell	Dolores	
44	Herud-Greene	Gay	
45	Jawor	Mary	
46	Kuhn-Hines	Anne	
47	Kurtz	Edwin	
48	Kurtz	Leslie	
49	LaFazia	Isobel	
50	Larson	Philip	
51	Lathan	James	
52	Lathan	Pauline	
53	Lathan	Robin	
54	Lathan	Sara	
55	Lathan	Kevin	
56	Lathan	Susan	
57	Longo	Tony	
58	Lush	Nancy	
59	Mackie	Thomas	
60	Marioenzi	Grace	
61	Marioenzi	Louis	
62	Messinger	Norman	
63	Milot	Arthur	
64	Milot	Martha	
65	Minto	Don	
66	Neale	Martha	
67	Neale	George	
68	Neronha	Manuel	
69	Newman	Ken	
70	Perry	Mary	
71	Quattromani	Denise	
72	Quattromani	David	
73	Quattromani	Shirley	
74	Reppe	William	
75	Reppe	Cinthia	
76	Richardson	Victor	

77	Richardson	Charlotte	
78	Robertson	Susan	
79	Robertson	Paul	
80	Robertson	Nick	
81	Rushworth	Florence	
82	Saulino	Alfred	
83	Saulino	Madonna	
84	Smith	Frances	
85	StGermain	Shirley	
86	Sutton	Robert	
87	Taft	Amy	
88	Templeton-cotill	Anna	
89	Thomas	Roberta	
90	Tiexiera	Joseph	
91	Todd	Carol	
92	Turillo	Laura	
93	Tyre	Richard & Lisa	
94	Vietri	Amanda	
95	Whitaker	Melvin	

This letter is in support of the project.

- A. Most people want it built there.
See response #3.
- B. The Department should use valid science and not to be swayed by politics.
No response needed.
- C. The uproar is a stalling tactic by a vocal minority of the town.
See response #3.
- D. An additional handwritten comment relates to the actions of residents that may contaminate private wells.
No response needed.

Form letter #3: Hydrogeologic Study of the Island

Table 3: Form Letter 3 was submitted by the following people:

#	Last Name	First Name	Additional Comments
1	Aresti	Ralph	How can any reasonable, intelligent, and morally upright person act in such a way that a precious resource--drinking water--would be irrevocably destroyed?
2	Atamian	Robert & Marian	
3	Aubin	Russel	Over 55% of the home owners on the island depend on private wells for their water, with no other facilities should our wells be contaminated.
4	Bobola	Sara & Steve	It would be a real black eye to the STATE to loose Jamestown as a

			place that people wish to live. This is our only water supply and this project is not worth the risk!
5	Boucher	Nelson	Please protect our only source of water.
6	Brazil	Liz & Phil	
7	Carnevale	Mark	
8	Clark	Gregory & Lisa	
9	Cotsoridis	Susan	Please be diligent in assessing before proceeding.
10	Darigan	Alexandra	These letters amplify specific aspects of the concerns expressed in our previous handwritten letters.
11	Deffley	Bill & Ann	Please do not jeopardize our only source of water. There are so many other sites! And, if the highway barn is built and we end up with contaminated water,.... What is the back up plan???
12	Deffnere	Charles	
13	DeMolli	Alex	
14	Dutton	Janice	I am very concerned about disturbing contaminants in the landfill as I live in close proximity to it!
15	Forest	Donald	Please don't take the chance of contaminating my well water.
16	Giso	Fred	
17	Goodrich	Carolyn	
18	Halliday	June	Why on earth anyone would jeopardize that only water source we have on an ISLAND I'll never understand.
19	Hardy	George	
20	Infantoleno	Michael & Barbara	If you can't be absolutely sure that this project will not harm the wells and water supply of Jamestown don't you think it would be wiser to find another location for the barn?
21	Jacobson & Myers	Linda & Jon	Please don't risk our water supply.
22	Johnstone	William	
23	Knudsen	Rolf	It is only reasonable to be cautious when it comes to our water supply.
24	LaMartia	Janet	Do you really want to take a chance with the health and safety of our children's health? Why do we need to roll the dice when adequate study can provide the answers we need.
25	Laprey	Bob & Pat	When we voted against the barn at Taylor PT-It was because of the cost, not location. Within 240 the site was changed & approved & now we are frightened!
26	Magarian	Jana	
27	Martin	Stacy	Are you willing to help pipe in a fresh, uncontaminated water supply when my well becomes polluted? We would like some answers!!
28	McNeil	Sharon & Vernon	Please do not jeopardize our water supply.
29	Monaghan	Janet	Too much money has been spent on the design for the barn not enough testing has been done to protect our wells,.
30	Munafo	Dominic	We need answers to these questions and concerns!
31	Murphy	Greg & Dorothy	
32	Murray	Karin	Please stop this needless threat to my well!
33	Normand	Lynn & Charlie	We can't and the town doesn't care.
34	O'Duyer	Denise	Until the well/Farm is tested do not put up the highway barn.
35	O'Neill	Phil & Janet	This project presents a very serious possibility of severe health risks to residents! The site involved has been declared a TOXIC WASTE SITE by the Federal government. The risks involved certainly outweigh any benefits in proceeding without full certainty!
36	Leprih	Pamela	This issue is too important to allow unnecessary risks to be taken.

37	Perry	Wendy	
38	Pesare	Nina	Please don't take risks with our water supply. Thanks.
39	Poirier-Green	Jean	
40	Rafanelli	Josephine	It is imperative that all necessary precautions are taken in respect to water contamination!
41	Rainone	Keri & Richard	Do not take risks with our only water supply!!! Who do you think you are? We have small children here!
42	Reinan	Kirstin	Our water supply is a concern to us.
43	Reynolds	Sandra	Please do not take risks with our water supply. It's all we have.
44	Ritacco	Patricia	Please do what you can to protect our water supply!
45	Roche	Jane	We are very concerned!
46	Ruggiero	Deborah	Chris- Thanks for your help with our only water supply here.
47	Ryng	Ronald	
48	Sakovits	Carl & Suzanne	
49	Seidler	Harry	We ask that you please address these questions before moving ahead with this project.
50	Sheppard	George	
51	Smith	Helene	Please do it once and for all
52	Supron	Nicholas	I have 2 small children who drink and bath in this H2O.
53	Tinker	Thomas & Roslyn	I would think all _____ would want this study.
54	Turley	Hazel	Member Sierra Club of Rhode Island "Keep Our Bay Blue!"
55	Tuttle	William & Lisa	This highway barn does NOT need to go in a place where known contaminants could be released into residents' well water. This is our only source of drinking water. Please help!
56	Vigneault	Roland & Martha	
57	White	Peter	Please don't risk our health!
58	Johnson	Shelly	Please be careful with our water supply.
59	Kennedy	Kristin Dr.	
60	Hansen	Peter and Rita	We live 1 mile from the Jamestown landfill. We have 4 children. Our children cannot understand why anyone would take risks with well water that people drink, bath in and cook with. Please complete the bedrock studies before anyone is allowed to build on the old landfill site.

This letter opposes the project. It makes the following points:

- A. Why was a hydrogeologic study of the islands water supply never done?
See response #8.
- B. No one knows where the fractures are. Fractures, if disturbed, will move contaminants from the landfill into these "water pockets."
See response # 2 and 16.
- C. Other communities have used sonar and x-ray viewing ahead of time to complete these studies.
See response #29.
- D. As with form letter 1, additional handwritten comments nearly all address the importance of groundwater. Some of the comments indicate the federal government has declared the site to be a toxic waste site.
See responses #2 and #5.

Form letter #4: Jamestown is Unique

Table 4: Form Letter 4 was submitted by the following people:

#	Last Name	First Name	Additional Comments
1	Banks	Kathleen	Please help us keep our children disease free! We live so close to that site.
2	Del Buono	Vincent	Please act with prudence regarding this matter. A mistake could ruin the livability of our beautiful island.
3	Gamble	Edward	
4	Hamilton	Bruce	Please take all necessary precaution and effort to protect our drinking supply.
5	Harvey	Susan	Please do not take risks with our water supply.
6	Hull	Tim & Lisa	
7	Jepson	Steven	
8	Karon	Richard and Linda	Is the DEM Prepared to insure potable water for us if you allow the proposed excavation? If not then you cannot approve the project!
9	Lepre	Marie	Please do not allow this.
10	Lindsay	Philip	
11	Lynch	Pamela	I am extremely concerned for our water supply. Please do not allow risks to be taken regarding it.
12	MacMillian	Jean	
13	Malles	Alex	
14	Martin	David	We own Lots 248 and 249 next to the landfill & plan to build on these 2 lots.
15	Murray	Teresa	Without clean water we will be sick. We want safe drinking water standards.
16	Oates	Tom & Christina	Please keep this beautiful island safe!
17	Olsen	Scott & Cindy	
18	Pennine	Andrea	Please don't risk our water supply!
19	Petersen	Paul & Linnea	Our well is our only source of water. Please do not take risks with our water supply.
20	Pritchard	David	Please look into this. This is not just a NIMBY problem. This is real.
21	Ranaldi	Mike	We would like definitive information.
22	Smith	Larry & Janet	Please look into the risks of our wells being contaminated. It's our drinking water!
23	Toselli	Alfred	Please help us to protect our health and the water supply for future generations (our children).
24	Totten	Laura	Please do not threaten our water supply and our children's health!
25	Weibust	Lloyd & Beth	
26	Lemke	Karen and Arthur	

This letter opposes the project. It makes the following points:

- A. Jamestown is unique.
See response #11
- B. It is an island and a sole source aquifer underlain by highly fractured bedrock.
See responses #11 and 4
- C. Most residents rely on groundwater and should receive the highest level of protection.
See response #2
- D. Additional comments stress the importance of groundwater to the community.
See response #2.

Form Letter # 5: Viera Farms

Table 5: Form Letter 5 was submitted by the following people:

#	Last Name	First Name	Additional Comments
1	Abbood	Michael & Teresa	Please do not take risks with our water supply.
2	Almeida	Kathleen	It seems to me that it is only common sense not to take the risk of contaminating the water supply when there are apparently other sites that could be used.
3	Aresti	Ralph	To do construction in an area where ecological harm will most likely result, when other construction sites are available is -- well, dumb!
4	Atamian	Robert & Mariam	
5	Aubin	Russell	Please help to protect our only source of water. There are many other places on the island where a town barn could more safely be placed.
6	Barlan	Ron	Resolving the cause of these well's "problems" would prove DEM and all the assessments right or wrong and make this disagreement go away. For good or bad. Please determine what & how these wells problems fit into the picture.
7	Bobola	Sara & Steve	
8	Brazil	Liz & Phil	
9	Brendlinsen	Richard	The Jamestown incidents of cancer seem excessive to start with. Thanks.
10	Bricher	Carol	Please help everyone in this area keep their drinking water safe. Thank you.
11	Carnevale	Mark	
12	Clark	Gregory & Lisa	Please - do not take risks with our water supply!
13	Cotsoridis	Susan	Seems a reasonable path. Why not be cautious & check this out? My family would appreciate it.
14	Darigan	Alexandra	
15	Deffley	Bill & Ann	Please do not jeopardize our only source of water. There are so many other sites. And, if the Highway Barn is built on the landfill, and we end up with contaminated water, what is the backup plan???
16	Dobbins	Deborah	Please help clean up our water in Jamestown!
17	Dourado	John	Please do not risk our drinking water.
18	Dourado	Beverly	Please protect our water supply. Our wells are the only water source we have. Thank you.
19	Dutton	Janice	
20	Eunis	Rabecca	Please do not take risks with our water supply!
21	Eunis	Eric	I am quite disgusted with the risk the town is willing to take in this regard!
22	Forest	Donald	I ask you - If my well water becomes contaminated is the town going to provide me with municipal water?
23	Gagne	Denise & Gary	Please help protect our water supply.
24	Giso	Virginia	
25	Goodrich	Carolyn	
26	Halliday	June	We need to know.
27	Hansen	Peter & Rita & Family	We live one mile from the Jamestown landfill. We have four children. Peter and I and our children wonder why anyone would want to risk the contamination of our well water.

28	Hardy	George	
29	Henry	Joseph	Please do not take risks with our water supply
30	Hohenleiten	Andrea	Taking chances with Jamestown's water supply seems extremely short sighted.
31	Infantoleno	Michael & Barbara	Please use common sense when considering this barn proposal. You know that the land is contaminated. You know what can happen from disturbing this contaminated land. Why take the risk?
32	Johnstone	William	It was stated at meeting that two wells have failed on the Vieira Farm. The frailty of the water situation if caution is not used, the whole area will fail.
33	Knudsen	Rolf	Please have these wells tested We need assurances that our water will be safe to drink.
34	LaMantia	Kenneth & Janet	We consider this of utmost importance. Please act quickly.
35	Lepre	Bob & Pat	We have a well and are very concerned about the highway barn location and the disruption it will cause with our water supply.
36	Martin	Stacey	See comment #70
37	Magarian	Jana	Please do not jeopardize our water supply!
38	McCaffrey	William & Glenne	Just to let your department know; It was required that we catch all rainwater into a self contained system for a 20' x 10' addition we just completed. We own just under an acre of land and it cost us \$10,000. Why hasn't run off from this large building been required to do the same?
39	McNeil	Sharon & Vernon	Our water is a precious commodity. We respect it and so should you because it is all we have.
40	Monaghan	Janet	Please act quickly so our water is not contaminated.
41	Munafo	Patricia	Please don't risk the health of my family, neighbors, and community. Thank you.
42	Murphy	Dorothy & Greg	
43	Murray	Teresa	How can we wash our hands or take showers or drink water if it is pollutant? We don't want dirty water.
44	Myers	Jim	Water is a most precious commodity. Don't spoil it. How do you live without it? Thank you.
45	Nadeau	Joseph	
46	Normand	Lynn & Charlie	Please take the time to call so that we can minimize the risks to our water supply.
47	O'Duyer	Denise	
48	O'Neill	Phil	The Federal government has recognized the former landfill as a toxic waste site! Why consider a public works garage to house town equipment and employees at this site with even a remote possibility of creating a "Love Canal" threatening health and financial consequences to residents?
49	O'Neill	Janet	The DEM has the responsibility to protect people and the environment. It should have demanded extensive testing in this area years ago. Private citizens should not have to fight this hard for the right thing to be done. The history of this site is well known, and documented. For this department to allow a municipality to act recklessly with the health and well being of its citizens is beyond irresponsible. Do not allow this process to

			continue without guarantees the there is without a doubt no risks to me and my family's health. I appreciate your attention to this matter.
50	Pasquale	Thomas	
51	Perry	Ray	
52	Pesare	Nina	Please do not take risks with our water supply.
53	Poirier-Green	Jean	Please help protect our water supply!
54	Rafanelli	Josephine	I respectfully request that you disregard any previous "highway barn" correspondence bearing my signature because at that time I was not aware of the above facts. Kindly, do not take risks with our water supply.
55	Rainone	Richard & Keri	Do not take risks with our water supply...
56	Reviron	Kirstin	This a concern to our family. Thank you for your consideration.
57	Reynolds	Sandra	Please do not take risks with our water supply. Its all we have.
58	Ritacco	Patricia	Our drinking water is at risk-please make the effort to test it.
59	Roche	Jane	Please take note. Our water supply is vital.
60	Ruggiero	Deb	Chris-- Time is of the essence. This is our only water supply on island.
61	Ryng	Ron	This is our only drinking water. Please don't take risk with our water supply.
62	Sakovitz	Carl & Suzanne	Please do not take risks with our North End H2O Supply-do not build the Highway barn on an existing toxic site.
63	Seidler	Susan & Harold	After attending the open forum last week, these questions remain unanswered. Please do not take chances with our water supply.
64	Sheppard	Julie	Please do not take risks with our water supply!
65	Smith	Joseph	It isn't too much to ask that nothing be spared to avoid poisoning our water.
66	Smith	Helene	Please Mr. Walusiak, please do not let this just slide
67	Supron	Nicholas	Please don't let the town railroad this process! Thanks.
68	Tinker	Thomas & Roslyn	Err on the side of caution here. We have no other source of drinking water.
69	Turley	Hazel	
70	Tuttle	William & Lisa	Please do not take any risks with our drinking water supply! I have 2 year old and 4 year old children, and we rely on our well water.
71	Vigneault	Roland & Martha	Please reconsider this!
72	White	Sandra	Please don't risk our health.
73	Williamson	John & Mary Ann	Please retest the wells! The quality of our water is important to my health!
74	Johnson	Shelly	Please keep out water safe. There's no second chance.
75	Kenndy	Dr. Kristin	
76	Turley	Emmet	As a member of the Jamestown Planning Board in the 90's, I was instrumental in the vote the Planning Board in denying the use of the land, identified as Viera Farm, for the development of house lots. This denial was based on adequate Health reports of contamination of soil in a test well and mound of discarded asphalt and

			highway debris. In addition there was a restriction on building within 1000' of the town's transfer station due to leaching of contaminated waters. This information may need to be reviewed in the minutes of the planning board.
77	Mikolay	Michael	Please test the water. I have small children.

This letter opposes the project. It makes the following points:

- A. Why was the Viera Farms well not tested?
See response #1 and 28.
- B. These wells showed contamination and the NECC have asked the wells be retested.
See response #1 and 28
- C. Groundwater is their only source of water.
See response #2
- D. There were many additional comments regarding the importance of groundwater to the community.
See response #2.
- E. Some additional comment make reference to Love Canal and known contamination.
See response #5.
- F. One comment discusses why a smaller project was required to catch rainwater.
The Department does not have enough information to respond.

Form letter # 6: Urging the Department to Stand Up to Pressure

Table 6: Form Letter 6 was submitted by the following people:

#	Last Name	First Name	Additional Comments
1	Barrette	Gerard	
2	Barter	Clara	
3	Barthold	Fred & Joyce	
4	Boyle	Ken	
5	Brennan	William	
6	Bryer	James	
7	Buckley	Pat	
8	Bunkley	Jeanne	
9	Carlisle	Lisa	
10	Christman	Arthur	
11	Christman	D.M.	
12	Clarke	William	
13	Congdon-Pinto	Elizabeth	
14	Coyle	Isabel	
15	Defusco	Donna	
16	Delmonica	Ann	
17	Dwyer	Alyce	
18	Gallo	Barbara & Michael	
19	Garnett	James	
20	Garnett	Sally	
21	Gladding	Wendy	
22	Goode	Frances	
23	Gouveia	Alan	
24	Graham	E. W. Sterling	

25	Greig	T	
26	Harpool	Harry	
27	Hunt	Elaine	
28	Hutchinson	Richard	
29	Hutchinson	Ann	
30	Jamison	Lillian	
31	Jamison	Bonnie	
32	Katz	Jeffrey	
33	Lavallee	Mary Jane	
34	Lavallee	Roger	
35	Lee	Philip	
36	Lee	Robin	
37	Littlefield	Elizabeth	
38	Long	Shirley	
39	Lopes	Alfred	
40	Luth	Diana	
41	MacKabee	Frances	
42	Matoes	Marie	
43	McLoughlin	James	
44	Messinger	Karein	
45	Milot	Arthur	
46	Milot	Martha	
47	Murphy	Mary Beth	
48	Neronha	Veronika	
49	Netten	Elizabeth	
50	Norton	Dorothy	
51	Ouellette	Douglas	
52	Owens	Dennis	
53	Owens	Deborah-Ann	
54	Pearson	Brad	
55	Peckham	Donna	
56	Peckham	Robert	
57	Pemantell	James	
58	Quinn	John	
59	Quinn	Sylvia	
60	Rafonelli	Josephine	
61	Richardson	Donald	
62	Robertson	Paul	
63	Ronchie	Mary	
64	Ronchie	Arthur	
65	Safford	Susan	
66	Salt	Robert	
67	Smith	Albert	
68	Soukup	Margaret	
69	Southern	Mattie	
70	Stahl	Erich	
71	Todd	Thomas	
72	Vessello	Vincent	
73	Vieira	Mary Louise	
74	Vietri	Alfred	
75	Webster	Mary	
76	Webster	Dennis	

77	Welty	Robert	
78	Welty	Marcia	
79	Whitaker	Barbara	
80	Wilkie	Dena	
81	Wood	Nancy	
82	Wright	Ellicott	
83	Wright	Harrison	
84	Wright	Josephine	
85	Wright	Jane	
86	Wright	Daniel	
87	Wright	James	
88	Wright	Catherine	
89	Yates	Martha	
90	Young	Lucille	
91	Berglund	Virginia	
92	Sarois	Gary	
93	Couture	Philip	
	Twombly	Peter	

This letter supports the project. It makes the following points:

- A. The opposition is a vocal minority.
See response #3.
- B. The citizens of the Town have made this decision.
See response #3.
- C. There is no evidence the project will hurt the groundwater.
See response #2.

DEPARTMENT RESPONSES TO OTHER COMMENTS

In addition to the six form letters, the following comments were received. They were randomly assigned numbers beginning with #7.

Letter #7: David B. Van Slyke (Preti, Flaherty, Beliveau, Pachios & Haley LLP, 2/10/2006)

Comments opposing the project.

This correspondence also contains a 19 page attached letter from MACTEC (listed as letter #8) and is written on behalf of the NECC. Due to the length of the discussion of technical and legal issues, a separate summary of these two letters and the Department's responses are contained in Attachment C.

Letter # 8: Jeff McCrady and Stephen H. Mitchell, P.E. (MACTEC, 2/10/2006)

Comments opposing the project.

See above and Attachment C.

Letter # 9 Patrick K. Bolger (2/7/2006) :

Comments opposing the project.

- A. The plan is a significant deviation from the original closure plan.
See response #1.
- B. The area is a sole source aquifer under RIDEM regulations.

- See response #4.*
- C. Previous studies show contamination at Viera Farms.
See responses #28 and 15.
- D. More testing is mandatory.
See responses #1.
- E. The proposal contains disclaimers about the limitations of the data .
See response #6

Letter # 10: Richard L. Amirault (RIDOH, 2/8/2006):

Comments neutral regarding the project.

- A. Suggestion that the town may wish to address concerns by developing a contingency plan and incorporate it into the process.
See response #20.

Letter # 11: Rosemary Woodside (2/8/2006):

Comments opposing the project.

- A. In 1988 the town passed an emergency ordinance stopping residential development within 1000 feet of the landfill noting there was little or no control over quantity and types of material disposed. The ordinance also mentioned the lack of municipal water or sewer lines near the area. What has changed?
As explained in response #3, the Department is not considering zoning or local ordinance issues. See response #2 relative to the significance of groundwater.
- B. In 1987 monitoring wells at Viera Farms were found to be contaminated.
See response #28.
- C. Monitoring well network is based on 6 shallow wells. Why are there no cluster wells?
See also response #14
- D. Why are the Viera Farms wells not being tested?
See response #28.
- E. Why has the number of wells decreased from 13 to 6?
See response #1.
- F. Well EA-1B along with GZ-2 is the most down-gradient well and the most contaminated yet testing was discontinued in 2004.
See response #1 and 14.
- G. The deep well routinely showed hits of metals as recently as September 2004 but testing was discontinued in December of 2004.-
See response #1
- H. Why are there no well pairs?
See response #14.
- I. Why is there no pump testing?
See response #7
- J. Why are there no cluster wells?
See response #14.
- K. Why aren't wells tested more frequently?
See response #1.
- L. GZA reports have disclaimers.

- See response #6*
- M. Why has there been no hydrogeological study of the island?
See response #8
- N. How many violations of DEM and EPA regulations has Jamestown received in the past 15 years?
See response #3.
- O. The EPA is the governing agency of DEM and the Town. All EPA regulations should be enforced.
See response #9
- P. Where is the citizens group to oversee the closure?
See response #3.
- Q. Storm water catch basins are installed in a way that introduces surface water upgradient and directly into the landfill that will increase leachate production. This design will funnel runoff from the site onto an abutter's wetland over a GA aquifer. How will these wetlands be monitored?
See response #36.
- R. Will a permit from CRMC be required for the project given that runoff will eventually be through a salt marsh?
See response #30.
- S. The landfill is perhaps the most toxic piece of property in Jamestown
It is unclear what the comparison is based on, see response #5.
- T. Is there another landfill with an industrial facility on it that is both:
i On a highly fractured bedrock aquifer
ii Surrounded by private wells
iii In an area without an alternate source of drinking water.
See response #23.
- U. Will contamination occur when trash is moved to locate the DPW facility?
See response #12
- V. Why isn't the minimum standard for landfill closure being met?
See response #1
- W. Why isn't pavement on the road required as per RIDEM's comment on the 30% design.
See response #13
- X. Why isn't a methane mitigation system being proposed?
See response #1.
- Y. How will floor drain discharges be regulated?
See response #10.
- Z. RI Regulations indicate fracture trace analysis and tracer studies may be required.
See responses #1 and 8.
- AA. How will alterations to groundwater flow be studied?
See response #1.
- BB. No overburden wells have been installed. Will more wells be required?
See response #14
- CC. RI regulations require the installation of more monitoring wells.
See response #1

- DD. How will monitoring of reclassified aquifer be done? Will it ensure no exceedances of GA standards?
See response #1 regarding EMP.
- EE. Will 30 years of monitoring be required?
See response #1.
- FF. Excavated waste should be tested with more than PID.
See response #12
- GG. Is sampling of 1 soil sample/ 500 cu. yds sufficient?
See response 12
- HH. GZA letter of July 8, 2005 says no contaminants have been found in drinking water since 1984 but bis(2-ethylhexyl)phthalate was reported in 2002.
See response #15.
- II. GZA's 1992 assessment of Viera Farms says it was downgradient of the landfill, now they say it is not.
See response #15 and 28.
- JJ. In 1999, GZA said a well on Lot 47 would affect groundwater, in 2005 they said it will not impact groundwater flow patterns, which is correct?
See response #15
- KK. GZA in 2005 said sewage sludge was accepted until 1985. EA in 1991 indicates there was sludge disposal after that.
See response #15
- LL. GZA should be removed because of past involvement with the Town and the engineering firm that closed Block Island landfill should be hired.
See responses #31 and 21.

Letter #12: Louise Brendlinger (2/8/2006)

Comments opposing the project.

Comments were identical to previous letter from Rosemary Woodside above.

Letter #13: Andrew Justin Nicoletta (2/10/2006):

Comments opposing the project.

- A. Groundwater is very significant to the quality of life with no alternate source available.
See response #2
- B. The bedrock is fractured with a large lake under the ground.
See responses #11 and 16.
- C. The landfill is a toxic waste site.
See response #5.
- D. The storm water management will dump contaminated water on lot 47.
See response #36.
- E. The 200 gallons/day assumed for a water intake is not reflective of actual projected use.
See response #17.

Letter #14: Andrew Yates (2/10/2006):

Comments supporting the project.

- A. A vocal minority is using fear and smear to distract from science.
See response #3.
- B. The ongoing process will reduce water safety risks.
See response #2.
- C. North road is the best location for the barn, no other site is as good.
See response #3.

Letter #15: Anthony N. Lush (2/9/2006):

Comments supporting the project.

- A. The Department should use good science and not be swayed by political pressure.
See response #3
- B. Most Jamestown residents want the barn put at that location.
See response #3

Letter #16: Victor V. Calabretta, P.E. (2/9/2006):

Comments supporting the project.

- A. The NECC is a vocal minority, most people want it built there.
See response #3.
- B. The project will improve existing conditions and is what brownfields is meant to do.
See response #1 and 18.

Letter #17: Stacey and Michael Martin (2/10/2006)

Comments opposing the project. (These comments were attached to Form Letter 5 but are included as a separate comment due to their length.)

- A. Water supplies are in danger. Many human lives are at stake. Commenters have young children. Bureaucracy should be ignored and the Department should protect groundwater.
See response #2.

Letter #18: Dee Bates (2/3/2006):

Comments opposing the project.

- A. There has been massive dumping of chemicals some known and some unknown. The potential for ground water contamination is overwhelming.
The Department does not know the basis for either of these statements. See also response #5 and 2.

Letter #19: C. Richard and Jane W. Koster (2/8/2006):

Comments opposing the project.

- A. There is documented proof the Lot 47 well will enhance the risks of groundwater migration.
See response #15
- B. There is documented proof that sewage was transported to the landfill for disposal.
See response #15

- C. There is documented proof that the landfill was performing sludge composting up to 1999.
See response #15
- D. There is a documented statement from Dr. Robert Vanderslice of RIDOH that it is not a question of if but when wells become contaminated.
See response # 20

Letter #20: Richard Smith (2/8/2006):

Comments opposing the project.

- A. There was a discrepancy regarding GZA's statements on Viera Farms from 1992 to the present.
See responses #15 and 28.
- B. The Viera Farms wells have been contaminated.
See response #28.
- C. It is not proven that Brownfielding works.
See response # 18
- D. The environment should be the primary concern.
See response #2

Letter #21: Kathleen Fitzgerald and Keith Stavely (2/8/2006):

Comments opposing the project.

- A. There are other available sites and it should be placed there.
See response #3
- B. GZA cannot be sure there won't be contamination from the project, so why take a chance of contaminating groundwater.
See response # 2

Letter #22: Mike S?? (2/8/2006):

Comments opposing the project.

- A. The landfill has already contaminated private wells.
See also response #1 and 28.
- B. There may be accidents at the highway barn.
See response #19
- C. Why reuse contaminated soil at the landfill?
See response #12
- D. The water supply is threatened and cannot be replaced.
See response #2

Letter #23: David A. King (2/8/2006):

Comments opposing the project.

- A. GZA was the firm that said there should never be development on the abutting parcel.
*The Department reviewed the GZA Viera Farms report and finds no such conclusion.
See also response #15 and 28.*
- B. The commenter lives within 100 yards of the landfill and is concerned about groundwater.

See response #2.

- C. An expert from EPA and Director Sullivan have both been quoted as saying it is not a matter of “if” but a matter of “when” disturbing the old landfill would create a problem of contaminants leaching off the site.

See response #20

- D. Someone other than GZA should do the analysis.

See response #21

Letter # 24: Donna Kane (2/7/2006):

Comments opposing the project.

- A. Groundwater is the only source of water and trucks will pollute it.

See responses #19.

- B. GZA found contamination on the Viera Farms property and has reversed themselves.

See response #15 and 28.

- C. No other town in RI has built on a superfund site like this one.

See response #5 and 23.

Letter #25: Nancy L. and Robert W. Halstead (2/7/2006)

Comments opposing the project.

- A. Jamestown has been cited over the years by DEM for numerous violations that were documented by the NECC and not disputed by DEM.

See response 3.

- B. The town and GZA have lied about the site.

See response 15.

- C. Groundwater is threatened by the project.

See response #2.

Letter #26: Dwight S. Smith (2/7/2006)

Comments opposing the project.

- A. The area is a sole source aquifer.

See response #4.

- B. Excavation may have risks.

See response #12.

- C. GZA will reroute surface water.

See response #33.

Letter #27: David Bolger and Mark Lancaster (2/6/2006)

Comments opposing the project.

- A. Possible contamination of private wells.

See responses # 2.

- B. Possible contamination from the highway barn.

See response #19.

- C. There is no alternative for water supply.

See response #2.

- D. The town does not maintain things properly and is a bad neighbor.

See response #3.

- E. The town has not explored all available sites.

See response #3.

- F. The landfill should be closed, capped and monitored.

See response #1.

Letter #28: Steven W. Jepson (2/9/2006)

Comments opposing the project.

- A. GZA previously indicated the landfill was the source of contamination on the Viera Farms Property.

See responses # 15.

- B. The Viera Farms property should be retested.

See response #28.

Letter #29: Susan and Abbott Gregerman (2/9/2006):

Comments opposing the project.

- A. The landfill should be capped.

See responses # 1.

- B. Residents depend on the groundwater with no alternate source.

See response #2.

Letter #30: Richard Kingsley, PhD. (2/10/2006):

Comments supporting the project.

- A. Respondent is a geologist by profession.

No response needed.

- B. Siting of Highway barn and hazard mitigation are separate.

See response #1.

- C. Concerns are without merit and issues are easily addressed by proper construction and storage practices.

No response needed.

- D. The voters approved the highway barn and that is where it should go.

See response #3.

Letter #31: David Coppe, M.D. (2/10/2006):

Comments opposing the project.

- A. Potential contamination of the ground water, private wells and reservoir could lead to health concerns.

See response #2.

- B. Toxic substances in small amounts could lead to health concerns.

See response #2.

Letter # 32: Ellen M. Winsor (2/10/2006):

Comments opposing the project.

- A. Cape Cod and another superfund site in Ashland Massachusetts have shown severe contamination.

- See response #5.*
- B. The sole source aquifer is at risk and the site should be held to the highest regulatory standard.
See responses #1, 2 and 4.
- C. Concerns about Nyanza and Rose Hill were not addressed. Unlike these sites NECC was not allowed to have a citizens advisory group.
See responses #3 and 5.
- D. RIDEM should acknowledge the “Weingand Principle” that when an activity raises threats of harm to human health or the environment, precautionary measures should be taken even if some cause and effect relationships are not fully established scientifically.
The Department does not believe the chosen remedy threatens human health or the environment, see response #1.
- E. Environmental justice is not being achieved here.
See also response #27.
- F. To date the EPA has provided alternate drinking water to 615,000 people, we do not want to be added to this list.
See responses #2 and 5.

Letter #33: Norma Willis (2/7/2006):

Comments opposing the project.

- A. Fact- Jamestown is unique and Jamestown is an Island.
Agreed per response #11.
- B. Fact- Jamestown is a sole source aquifer.
See response #4.
- C. Fact- Jamestown’s landfill is surrounded by private wells.
Agreed per response #2.
- D. Fact-Jamestown has a highly fractured bedrock aquifer.
See response #11.
- E. Fact- Jamestown’s landfill has seeped toxic VOC’s off the landfill in the past.
See response #28.
- F. Fact- GZA cannot guarantee that pollutants will not contaminate private wells.
See response #2.
- G. Fact- 57% of Jamestown residents rely on private wells.
The Department has not verified this information but does not dispute it.
- H. If the bedrock aquifer becomes contaminated those on private wells will have no recourse.
See response #2.
- I. Attached article where a “lightly contaminated” soil is used to recap a landfill in Worcester. The article draws a contrast to Woonsocket where clean soil is placed are part of an engineered cap.
See response #32.

Letter #34: Lee Tuthill, PE (2/9/2006)

Comments supporting the project.

- A. Project will improve the groundwater while providing a much needed facility.
See response #1 and 2.
- B. Most Jamestown residents want it built there.
See response #3.
- C. Commenter drinks from this aquifer and believes it to be safe.
No response needed.

Letter #35: Karen and Don Easton (2/8/2006)

Comments supporting the project.

- A. Forces opposing the barn have more financial resources than those supporting it.
No response needed.
- B. RIDEM should use good science and ignore the “background noise” regarding this project.
See response #3.
- C. There is no evidence that the barn will cause a problem.
See response #2.
- D. Most residents of Jamestown voted to put it there.
See response #3.

Letter #36: J. Christopher Powell, Jamestown Conservation Commission (e-mail 2/10/2006, hard copy 2/16/2006).

(This comment was subsequently withdrawn after the comment period).

Comments supporting the project.

- A. The Conservation Commission is on record as supporting the project.
No response needed.
- B. Locating the project here would prevent another greenfield from conversion to industrial use.
See response #18.
- C. The location of the DPW facility on the landfill is an integral part of the remediation.
See response #3.

Letter #37: Kurt D. Musselman (2/10/2006)

Comments opposing the project.

- A. Commenter includes an explanation of his background that includes:
 - Mother works at RIDEM and father works for FDA.
 - Former intern in environmental law at the RI Attorney General’s Office
 - Certified brew master (described as a food scientist and an engineer that brews beer)*No response needed.*
- B. Fact- the landfill is not properly closed.
See response #1.
- C. Fact- EPA exempted the site from the NPL list due to funds making the site a state (RI) responsibility.
See response #5.

- D. Fact- DEM desires to use an EPA exemption to circumvent normal CERCLIS landfill closure.
See response #5.
- E. Fact- Contaminants have been found on monitoring wells at the site.
No response needed.
- F. Fact- The current plan involves disturbing CONTAMINATED soil.
See response #12.
- G. Fact- The current plan involves changing the surface water FLOW and groundwater RECHARGE.
See response #33.
- H. Fact- The current plan involves NO CONTINGENCY FOR backup water supply to citizens using private wells.
See response #2 and 20.
- I. Fact- Current “brown-field” procedures involve finding uses for sites that have been PROPERLY REMEDIATED.
See response #18.
- J. Fact, There is at least one well immediately adjacent to the site that has a contaminated well.
See response #28.

Letter #38: Franklin Julian (2/10/2006)

Comments opposing the project.

- A. Studies have been done that indicate the proposal will contaminate wells in the area.
The Department is not aware of such a study, see response #2.
- B. 57% of residents rely on groundwater
The Department has not verified this information but does not dispute it.
- C. The barn should be located at Fort Getty.
See Response #3.

Letter #39: John Mecray (2/10/2006)

Comments opposing the project.

- A. A hydrogeologic study has not been done and should be.
See comments #8.
- B. Contamination has been found on an adjacent property.
See response #28.
- C. Site is a known hazardous waste site.
See response #5.

Letter #40: Carol Nelson-Lee (2/11/2006)

Comments supporting the project.

- A. The closure plan is well thought out and will result in a cleaner site. The plan includes the following items:
- i Excavate and evaluate material buried at the landfill.
 - ii Change grade of land so excess runoff will be diverted from the landfill
 - iii Improve drainage with vortex separators to keep gasoline out of storm water

- iv Improve entrance roads
- v Build the highway barn.

The understanding of the plan is correct, except that the excavation of waste will be only for very limited areas (under the barn and under some drainage areas).

- B. Segments of the videotapes have been edited and distributed in such a way as to inaccurately characterize the meeting and ridicule the speakers.

See response #24.

Letter #41: James K. Cardi M.D. (2/10/2006)

Comments opposing the project.

- A. How many landfills have been closed in this manner (i.e. excavated).

See response #23.

- B. How many landfills have industrial facilities in areas only served by private wells?

See response #23.

- C. What is the basis of the statement at the meeting by Laurie Grandchamp that the landfill is fairly benign?

See response #34.

- D. Who will pay for monitoring of private wells? Who will pay for investigations?

See response #1 and 20.

- E. Private wells are very important and impact both health and financial well being of the residents.

See response #2.

Letter #42: Dennis H. Webster (2/9/2006)

Comments supporting the project.

- A. The project is of reasonable cost and will improve the groundwater.

See responses #1 and 2.

- B. There is the same level of effort for the landfill whether the garage is built or not.

See response #1.

- C. Much of the fear is unfounded.

See response #2.

Letter #43: Quentin Anthony (2/9/2006)

Comments supporting the project.

- A. There is no scientific reason that the project should not go forward.

See response #2.

Letter # 44: Susan and Abbott Gregerman (2/10/2006)

Comments opposing the project.

- A. We should err on the side of caution and not threaten the groundwater.

See response #2.

Letter #45: Holly Turton (2/10/2006)

Comments supporting the project.

- A. The concerns regarding groundwater are without merit and the highway barn should be built there.
See response #3.

Letter #46: Marcie Lindsay (2/8/2006)

Comments opposing the project.

- A. We should err on the side of caution and not threaten the groundwater.
See response #2.

Letter #47: Daniel O'Neill (2/10/2006)

Comments opposing the project.

- A. Groundwater is very important for drinking and bathing.
See response #2.
- B. Fractured bedrock underlies the site and may flow in a different direction.
See response #11.
- C. Jamestown has a long history of environmental violations.
See response #3.
- D. No variances to solid waste regulations should be permitted.
See response #1 and 22.
- E. Wells within the waste must be sampled.
See response #14.
- F. The landfill is a geologically unstable waste pile over toxic chemicals.
There is no data to support this characterization.
- G. Why are Lot 47 and Summit Ave part of the plan when Laurie Grandchamp said they are not jurisdictional?
See response #26.

Letter # 48: Joe S. Loitherstein, P.E., Loitherstein Environmental (2/9/2006)

Comments opposing the project.

- A. Further assessment of chlorinated volatile organic compounds is needed. Letter includes a proposal for Loitherstein Environmental to do the work for \$35,000 not including the cost of wells.
See response #35.

Letter #49: Saverio and Cheryl Rebecchi (2/9/2006)

Comments opposing the project.

- A. The bedrock aquifer supplies water to the entire island and must be protected.
See response #2.
- B. Forbidding industrial activity at the landfill is the best way to delay the release of unknown contaminants.
See response #1.
- C. In 1987 town issued an emergency ordinance forbidding new development within 1000 feet of the landfill.
See response #3.

- D. GZA has found contamination at the Viera Farms wells. The comment also includes reference to materials on the www.northendcc.org site.
See comments #15, 28 and 24.
- E. Laurie Grandchamp should not make characterizations of the landfill as benign as it shows lack of objectivity.
See response #34.
- F. Filters will not protect human health unless the wells are tested every day.
See response #20.
- G. Onsite activity may cause chemical at the landfill to explode and release poisons miles away.
See response #5.
- H. The Town has a poor history of maintenance at the site.
See response #3.
- I. There are many other sites where the barn can be located.
See response #3.
- J. The area is a sole source aquifer.
See response #4.

Letter #50: W. Bruce Turner (2/10/2006)

Comments opposing the project.

- A. The site has been inadequately studied.
See response #1.
- B. Groundwater in Jamestown is a precious resource that needs to be protected.
See response #2.

Letter #51: Darcy Magratten (2/9/2006)

Comments supporting the project.

- A. The site has been adequately studied.
See response #1.
- B. Concerns for groundwater from the project are not warranted.
See responses #2 and 5.

Letter #52: James Estes (2/10/2006)

Comments supporting the project.

- A. Most residents of Jamestown want to see the garage constructed at that location.
See response #3.

Letter #53: William W. Karl (2/10/2006)

Comments opposing the project.

- A. Movement and vibrations from the project will contaminate hundreds of wells. Lawsuits will result. Residents will have to rely on store bought water. Property values will plummet. Water will have to be provided by the town that will tax the system.
See response #2.
- B. Cancer rates in Jamestown are already very high (the commenter was diagnosed with prostate cancer).

See response #25.

Letter #54: Kathleen Karl (2/10/2006)

Comments opposing the project.

A. The project will harm groundwater causing lawsuit and health problems.

See response #2.

B. Another location should be chosen.

See response #3.

C. Cancer in Jamestown is the highest in the state.

See response #25.

Letter #55: Gloria J. Kurz (2/10/2006)

Comments opposing the project.

A. The project threatens groundwater.

See response #2.

B. A hydrogeologic study is needed.

See response #8.

Letter #56: Susan R. Little (2/10/2006)

Comments opposing the project. (An identical letter was also submitted with Susan Little's name at the top and John G. Shannon [commenter #64] at the bottom)

A. The project threatens groundwater.

See response #2.

B. The island is a sole source aquifer.

See response #4.

C. No variances should be granted. More study is necessary.

See response #1.

D. An impermeable cap is needed.

See response #1.

E. High levels of heavy metals have frequently been detected at the site.

See response #2 and 5.

F. Truck traffic on the landfill may expose waste.

See response #13.

G. Storm water discharges will dump contaminated water into wetlands.

See response #36.

H. More groundwater monitoring is required.

See response #1.

Letter #57: Alexandra Hope and Francis J. Darigan Jr. (2/7/2006)

Comments opposing the project.

A. The project threatens groundwater.

See response #2.

B. A non-toxic site should be found for the barn.

See responses #3 and 19.

Letter #58: Richard Eannarino (2/7/2006)

Comments opposing the project.

- A. What was the cost of the cleanup of the Davis Dump? What were its impacts?
See response #5 and 3.
- B. What is the cost to the town to maintain and monitor the garage for the next 10 years? What is the cost to remove all the waste in the area of construction?
See response #3.
- C. William Munger testified waste ranging from thermometers to paint cans have been disposed of at the site. What is the cost of heavy equipment transversing pavement covering with such waste.
The Department does not believe that mercury thermometers, if they are present in the landfill will impact paving procedures and costs. See also response #3.

Letter #59: Barbara Infantolino (2/8/2006)

Comments opposing the project.

- A. The project threatens groundwater.
See response #2.

Letter #60: Sarah Baines (2/10/2006)

Comments opposing the project.

- A. The project threatens groundwater.
See response #2.
- B. A firm other than GZA should do the work.
See response #21.
- C. The “flume” from a superfund site on Cape Cod caused extensive damage and was very expensive to remediate.
See response #5.
- D. Residents will have to pay for water filter if the landfill contaminates wells.
See response #20.

Letter #61: Donna P. O’Neill (2/10/2006)

Comments opposing the project.

- A. The project threatens groundwater.
See response #2.
- B. Any building on the site must include mandatory provisions for alternate water supplies to the residents.
See response #3.

Letter #62: Melissa Mastrostefano (2/9/2006)

Comments opposing the project.

- A. The project threatens groundwater.
See response #2.
- B. Cancer rates in Jamestown are very high.
See response #25.
- C. Arsenic at the site poses a danger to the groundwater.

- Recent groundwater sampling results do not show arsenic to be a problem at the site.*
- D. Contamination has been found at Viera Farms.
See response #15 and 28.
 - E. The bedrock at the site is fractured.
See response #11.

Letter #63: Linda A. Scott (2/9/2006)

Comments supporting the project.

- A. The project will improve groundwater.
See response #2.
- B. The Department should use sound judgment and not be swayed by a vocal minority.
See response #3.

Letter #64: John G. Shannon (2/9/2006)

Comments opposing the project.

- A. The project threatens groundwater.
See response #2.
- B. The proposal is to excavate and rebury the waste.
See response #12.

Letter #65: Joan E. Jordan (2/9/2006)

Comments opposing the project.

- A. The site will probably contaminate the aquifer.
See response #2.
- B. The testing was not properly done at the site.
See response #1.
- C. Another site should be used.
See response #3.

Letter #66: Raymond Iannetta (2/9/2006)

Comments opposing the project.

- A. Jamestown is unique.
See response #11.
- B. Exeter and Hopkinton are able to bring municipal water to residents if the wells become contaminated.
See response #23.
- C. The plan does not call for paving the road over the landfill.
See response #13.
- D. The reduction in the test wells was allowed because GZA showed a statistical analysis that showed level or downtrend in MCL's. The statistics are misleading because EPA does not have MCL's for some VOC's, cobalt. Also chromium levels have risen.
As discussed in response #1, the EMP has already been approved. There seems to be confusion here between MCL's and statistical analysis of contaminants trends. As

part of the EMP, there is a requirement to analyze statistically significant increases of analytes that are above MCL's or above background. See also response #27.

- E. The Department should not rely on MCL's as drinking water standards.
See response #27.
- F. There should be no expansion because the site sits on a sole source aquifer.
See response #4.
- G. The Town should post a bond to connect all residences to public water.
See response #3.

Letter #67: Barbara Noel Tuthill (2/13/2006)

Comments supporting the project.

- A. DEM should stand up to the vocal minority opposing the project and approve it.
See responses #1 and 3.
- B. There is no evidence the project will damage groundwater.
See response #2
- C. The current controls and monitoring are adequate to ensure safety of the aquifer.
See response #2

Letter #68: Bob Dolan (2/8/2006)

Comments supporting the project.

- A. The small group that dominated the Town meeting on the site does not represent most of the residents. No site will be without community opposition.
See response #3.
- B. The site was approved overwhelmingly at the financial town meeting.
See response #3

ATTACHMENT B

RIDEM/OFFICE OF WASTE MANAGEMENT RESPONSES TO COMMENTS RECEIVED FOR THE REMEDIAL ACTION WORK PLAN AND 50% DESIGN DRAWINGS

FORMER JAMESTOWN LANDFILL

JANUARY 2006

Prepared July 6, 2006

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1. The Scope of the Regulatory Review Process

The general steps in the Department's Site Remediation Approval Process include the following components:

- The site is investigated.
- Data is compiled and a Site Investigation Report (SIR) is submitted for Review/Approval. Said Report is also required to propose conceptual remedies.
- The Department issues a "Program Letter" which triggers formal Public Notice and Comment on the SIR.
- The Department issues a "Remedial Decision Letter" after evaluating public comment and reaching a final decision on the SIR and proposed remedy
- A "Remedial Action Work Plan" (RAWP) is submitted for Review/Approval, that provides additional engineering details on the remedy.
- The remedy is implemented.

Remedial Design and Environmental Monitoring Plan

The Site Investigation Report with the associated conceptual remedy for the Jamestown Landfill were approved in 2004. These approvals went through the appropriate public notice and comments periods and the Department received comments from NECC members as well as others. Once the remedy is chosen, the *Site Remediation Regulations* do not require any other public notice or public comment periods to occur during the remedy design phase. The remedy, which was approved in a Remedial Decision Letter dated April 22, 2004, included the following key elements:

- Increasing the thickness of the cap to a minimum of two feet of soil.
- Re-grading of the site to meet minimum and maximum slope requirements of the solid waste regulations.
- Development and implementation of a revised groundwater monitoring plan.
- Design and implementation of a storm water management system to reduce ponding and erosion.
- Establishment of an Environmental Land Use Restriction to ensure the long-term implementation of the remedy and prevent residential development at the site.
- Implementation of a Post Closure Environmental Monitoring Plan (EMP)

During the February 11, 2004 public meeting and the April 19, 2004 response to public comments letter, the Town of Jamestown offered to conduct an additional public workshop at the 50% design phase of the Remedial Action Work Plan in order to allow further public input into the remedy design.

The Post Closure Environmental Monitoring Plan (EMP) that was part of the remedy was approved on November 10, 2004 after a process of review, comment, discussion and resubmission. The Department reserves the right to require changes to the remedy or the EMP if conditions change, new data becomes available or the regulations change. Barring these things, the Department is reviewing the 50% Design only as it affects implementation of the approved remedy. There has been criticism that the Department seems to have already made up its mind to support the remedy and monitoring. It is true that the Site Investigation and EMP were approved by the Department after appropriate review and public comment and therefore, the Department did render a final decision on these documents. The Department reviewed the 30% Design (that included the barn) and is currently reviewing the 50% Design to determine if it is compatible with the remedy and complies with the Regulations.

Given the Town's decision to hold an additional workshop, the Department has also reviewed the recent public comments submitted to determine if any changes to the remedy selected and/or EMP are warranted, based on new information provided and/or information that alters the Department's previous understanding of site conditions. Throughout the 30 years of monitoring, the data has been evaluated and will continue to be evaluated using approved EPA statistical procedures. Those protocols also include triggers to potentially require additional incremental remedial measure should significant statistical exceedances occur. Based on the current data, the Department does not anticipate that this will occur.

The Department's regulations call for a total of 30 years of post closure monitoring. The Town has agreed to 30 years of monitoring following approval of the remedy. In that period, if the Department sees changes in contaminant concentrations or aquifer characteristics it will reevaluate the monitoring well network accordingly.

Also, the Department had requested the Town sample private wells in the area to provide an additional layer of protectiveness. During the Site Investigation, the Town attempted to gain access to the Viera Farms property to sample the monitoring wells. It was reported to the Department by the Town that access to the monitoring wells on the Viera Farms Property was refused by the property owners. As a result, additional monitoring wells were installed on the landfill property to monitor groundwater quality in the southerly direction. If there were private drinking water wells on the Viera Farms property, sampling of those wells would have also been requested.

Financial Responsibility for the Landfill

Throughout the process, the Department considers the Town to be the responsible party for the landfill based on our *Regulations as well as state and federal statutes*. Therefore, the cost of investigation and remediation of the landfill or any areas impacted by the landfill is the Town of Jamestown's responsibility.

2. The Significance of Groundwater

The Department received the most number of comments relating to the importance of groundwater to the residents of the area. In Rhode Island 25-30% of the population relies on groundwater as their primary source of drinking water, and the State's regulations reflect this importance. Consequently, *RIDEM Rules and Regulations for Groundwater Quality*, Section 8 has the following prohibitions:

8.1 Groundwater shall be maintained at a quality consistent with its classification. No person shall take actions that violate or cause to violate the standards established in the Rules and Regulations.

8.3 No person shall operate or maintain a facility in a manner that may result in a discharge of any pollutant to groundwater without the approval of the Director.

The *Remediation Regulations* and *Solid Waste Regulations* are both structured to provide special protection to drinking water aquifers, which are designated as GA and GAA. The area surrounding the Jamestown Landfill is classified by RIDEM as GA, indicating it is designated to be suitable for drinking water use by the public without treatment.

The Department's Groundwater Regulations do allow groundwater beneath an inactive landfill to be reclassified, which is a recognition of the potential impacts past filling activity could have on the groundwater's current quality. On October 15, 2004 the Town of Jamestown submitted a request to the Office of Water Resources to reclassify the site as GB (the request was revised on December 6, 2004). In June of 2005, after a public comment period, the groundwater at the site was reclassified to GB. By policy and regulatory mandate the Department does not allow degradation to any aquifer and approved remedies are designed to reduce any likelihood that contamination will occur.

Although the groundwater underneath the landfill is GB, groundwater monitoring is required to ensure that it will not cause degradation to adjacent GA areas. **Therefore, the landfill closure program has viewed groundwater protection to be of paramount importance when evaluating remedies for landfills in GA and GAA aquifers.**

Many of the comments imply that the Department's procedures at other sites should not apply here because the area is served by private wells with no municipal water system in place. It should be noted that the Department has dealt with and continues to deal with many sites both on islands (such as Prudence Island, Block Island and Aquidneck Island) and in other areas where residents rely on the groundwater as their only source of drinking water. The Department has overseen the installation of what it believes is a significant and adequately spaced groundwater monitoring well network over the site as well as a private well sampling program.

The Department believes that the current storm water management at the site is not adequate and has observed both ponding and erosion at the site. These conditions increase infiltration through the landfilled materials, that is a potential risk to the underlying groundwater. The remedy approved in 2004 requires improvements to this storm water management system to address these concerns. This remedy went through an exhaustive review, as well as, public comment period.

In spite of the problems, the monitoring wells show very small levels of contamination within the site. Nevertheless, the Department is anxious to see the remedy implemented since we believe the measures will improve groundwater and surface water conditions at and around the site.

There have been comments that the proposed highway barn should be forbidden as it may contaminate wells miles away from the site. Many of the commenters believe either that there is a highly concentrated plume of contaminants at the landfill, something the extensive investigation has not shown to be the case, or that the contaminant plume will become more concentrated as it leaves the site, which is contrary to scientific principles. The data collected to date, over multiple years has detected only low levels of some contaminants during several monitoring events. Also in the last three rounds of sampling, all the monitoring wells at the site have met drinking water standards. The assertion that a highway barn will mobilize huge quantities of contaminants for such long distances is not reasonable given the nature of contaminants present and the hydrogeology of the area.

Furthermore, if the remedy is delayed, given the current ponding and erosion, it is almost certain that such a delay will result in continued leachate discharge to the aquifer. Although current levels are relatively low, the Department believes that to allow these higher levels of leachate generation to continue to occur to prevent the very unlikely scenario is scientifically justifiable, especially since the site is surrounded by a GA aquifer.

The Department believes the final remedial measures proposed, as conditioned, will be protective of the groundwater resource. The remedy calls for improvements of storm water management as well as better erosion controls. The Department is also requiring the plan be altered to pave additional areas. In addition, said remedy includes 30 years of continued long term monitoring of the groundwater, with appropriate and automatic regulatory triggers incorporated for any significant statistical exceedance found in future groundwater results.

A “blanket” or state imposed prohibition on the Town’s reuse of their property is therefore not supportable based on the existing environmental conditions known at the site.

3. Local Government and Community Issues

Town Jurisdiction and Authorities

The Department has received a significant number of comments urging the Department to use good scientific and engineering principles to guide the review process. Many of these comments expressed concern that the Department is or may be influenced more by political pressure than science to reject the project and overturn the will of the voters of Jamestown and their elected government.

The Department respects the Town of Jamestown's authority, as a municipality of the State of Rhode Island to govern those areas within local jurisdictional control. For this reason, the Department's environmental review has not considered the pros and cons of the site versus any alternative locations the Town may have chosen for their highway barn facility. The Department's review is also **not** considering such aspects as aesthetics of the proposed barn, traffic, zoning, cost estimates or whether the site is ideally situated for efficiency. Such issues are clearly within the Town's jurisdiction and the Department is without legal authority to override the Town in such local matters. The Department has jurisdiction over matters involving Individual Sewerage Disposal System or ISDS, wetlands and storm water management at any site that must be complied with to construct such a facility. As discussed in Response #10, the town will need to file appropriate applications with the Office of Water Resources to be in compliance with these rules. Unlike the Office of Water Resources, the Landfill Closure Program only has authority over construction as it affects the landfill closure. If the highway barn were to be proposed on a parcel that did not contain a landfill or was not contaminated, the Landfill Closure Program would have no jurisdiction to comment on any aspects of the construction. However, given the fact that the barn is proposed for a property that falls under the Department's jurisdiction and we have concurred with the proposed remedy, the construction and operation of the highway barn facility must be consistent with the remedy.

The Department has received requests to invest a local citizen's group with authority to oversee the project. The Department does not have the authority to delegate control of the oversight of the project to private parties. However, the Town may have its own requirements regarding citizen input into such projects.

There were comments at the public workshop regarding the possibility that operation of the garage and trucks may result in punctured gas tanks or improperly stored equipment, and these were given as reasons to move the garage to another, uncontaminated property. As all of Jamestown is underlain by GA aquifers in fractured bedrock, to require the barn to be moved based on speculative environmental concern would move these risks but not minimize them. Actually, if problems did occur at the garage at the landfill, the monitoring well network could give an early warning of such contamination, something another site may not provide. The Department does not require monitoring wells at highway barns, even those over Sole Source Aquifers such as Block Island.

History of Violations by the Town of Jamestown

The Department has also received comments that Jamestown is an environmentally irresponsible municipality and therefore cannot be trusted to maintain the landfill as required. The Department permits over 40 active solid waste management facilities, as well as oversees, numerous inactive facilities, such as the Jamestown Landfill. These facilities are owned/operated by municipalities and private parties. There is not one active or inactive solid waste management facility in all of Rhode Island that has not had deficiencies.

As part of one comment, the Department was asked to indicate the number of violations Jamestown has been cited for in the past 15 years. Other comments have inquired or commented regarding past violations where the Town was cited by the Department and USEPA. The Office of Waste Management and the Office of Compliance and Inspection have reviewed their records and have found no Notices of Violation or other formal enforcement actions regarding the landfill property since its closure in 1984. The Office of Waste Management did send written notifications to the Town documenting non-compliance on the dates listed below:

- December 14, 1998- Letter of Deficiency regarding exposed waste, standing water and sandblasting grit stored at the landfill.
- March 31, 1987- Letter notifying Town of improper brush handling and seepage of hydraulic oil at the transfer station.
- May 14, 1987- Letter notifying Town lack of staffing during operating hours, improper brush handling and waste storage in the leaf composting area.
- July 24, 1987- Letter notifying the Town of white goods and metal being stored on the ground at the transfer station.

Such Letters of Deficiency are used to document non-compliance so that the owner/operator can address the problem. The deficiencies, if not addressed may become violations subjecting the owner/operator to formal enforcement action and penalties (i.e. Notice of Violation and Penalty). The Town was also sent letters in 1986 and 1988 regarding its lack of quarterly monitoring of groundwater.

The Department has records of inspections from 1976 to 1984 of the landfill during its active life. These inspection records and associated letters and Notices of Violation show the Town was cited for a number of violations. Most of the violations involve lack of daily cover, improper cover of brush, bulky waste and construction debris, and windblown trash. There were also issues regarding odors, lack of equipment (fire extinguisher, communications and working bulldozer), salvage material being mixed with brush, erosion, surface water ponding, not maintaining a 200 foot buffer and lack of proper access restriction.

One comment concluded that because a group of alleged violations that were identified by residents at the informal workshop and were not disputed, they must be true. The documents in question were never subsequently provided to the Department. Therefore the Department cannot confirm or deny their contents.

It is also important to note that while Jamestown has volunteered to join the Program, there are many towns with landfills in areas served by private wells that have done no study or remediation on their landfills at all.

4. Sole Source Aquifer

The Department has received numerous letters pointing out that Jamestown is a Sole Source Aquifer. While there can be no disagreement that much of the northern portion of the island is served by private wells, and that there is no municipal water system serving this portion of the community, the area is not, (by RIDEM regulations) classified as a Sole Source Aquifer. The commenters may be relying on an earlier statement by MACTEC on behalf of the North End Concerned Citizens where they made an assertion that it is an “immutable fact” that the island is a “geologic sole source aquifer”. While the Department has searched and found no definition or reference in literature to a “geologic” Sole Source Aquifer, a Sole Source Aquifer is defined by RIDEM’s *Rules and Regulations for Groundwater Quality* as follows:

"Sole source aquifer" means an aquifer designated by the United States Environmental Protection Agency as the sole or principal source of drinking water for the area above the aquifer and including those lands where the population served by the aquifer live; that is, an aquifer which is needed to supply 50% or more of the drinking water for that area and for which there are no reasonably available alternative sources should the aquifer become polluted.

The Department **cannot** designate a sole source aquifer. Only the USEPA has that authority. Rhode Island has three such designated sole source aquifers: Block Island Aquifer, Pawcatuck Basin Aquifer System and the Hunt-Annaquatucket Pettaquamscutt. The North End Concerned Citizens were made aware of this and it was suggested they petition EPA for this designation. The Department recently learned that the NECC group submitted a request for Sole Source Aquifer designation to the EPA in January 2006. The Department has not yet seen a copy of the request for Sole Source Aquifer designation. If such designation is approved, it would not impact this project, because the landfill closure program views GA aquifers as critical to protect, however, it may influence siting of other facilities in the area. The Department does not disagree that the additional support of such aquifer designation may be beneficial. Islands are unique in that their aquifers are to some degree isolated. While Block Island has a greater physical separation than Jamestown, Conanicut Island’s bedrock aquifer is still isolated from the mainland and from Aquidneck Island. It is also worthy to note that the Sole Source Aquifers EPA has designated in Rhode Island all occur within glacial outwash deposits,

that unlike the till around this site, are much more capable of quickly transmitting contaminants in the overburden.

Information on Sole Source Aquifer Designation can be found at the following web site: <http://www.epa.gov/safewater/ssanp.html>.

As discussed in response #2, the area is classified as a drinking water aquifer (GA) and the residents, as previously stated, rely on private wells for drinking water. As is explained in response #2, the Department views any degradation of this aquifer as unacceptable and contrary to the *Regulations*. The reason the Department is raising this issue is that there are many other sites in the program that are in areas where residents rely solely on groundwater and have no public water lines available but are not designated as Sole Source Aquifers by USEPA.

5. EPA Designation of the Site

A review of the comments indicates that a significant number of people have been informed that the site was determined by EPA to be a “toxic waste site” or is a “CERCLIS contaminated landfill.” Other comments have identified it as a superfund site. We believe it is important to clarify EPA’s assessment of the site. The site was placed on CERCLIS (EPA’s inventory of **potentially** contaminated sites to be investigated) on March 11, 1988. All the current and recently active landfills within the state at that time were placed on that list in the late eighties and early nineties in order to determine **if** they posed a risk to human health and the environment. The fact that EPA maintains that listing on CERCLIS does not mean EPA has determined it contains hazardous waste or presents an environmental threat. There also may be some confusion between a listing on EPA’s CERCLIS list versus nomination to EPA’s National Priorities List (commonly known as the “Superfund” list). The latter, unlike the former, does restrict the owner’s property rights because it indicates that EPA has determined the site is a threat to human health and the environment. On September 5, 2001, EPA changed the designation of the site to State Lead. This designation indicates two conclusions made by EPA:

- USEPA will take no further action for the site under CERCLIS as it has determined the site does not present an imminent hazard to human health or the environment.
- USEPA has concluded that the site’s environmental risk makes it a low priority and therefore appropriate to be given State Lead.

Many comments have drawn parallels with Superfund sites in Rhode Island and Massachusetts as well as Love Canal in New York. They ask why things are done differently at the Jamestown Landfill. The answer is that it is being handled differently by both the Department and USEPA because the Jamestown Landfill is very different when compared to actual Superfund sites. As opposed to contaminant levels at the Jamestown

Landfill hovering at the detection limit (in the low part per billion range), many of the Superfund sites with contaminants levels significantly above health based standards with large, concentrated contaminant plumes. It has also been documented at several of these Superfund sites that tens of thousands of gallons of industrial waste were historically disposed, as opposed to the disposal of municipal waste. There obviously exists a large amount of misinformation through the community that such a large, concentrated plume exists and is threatening the water supplies of the Town. To act on this belief would be to not only make unsupported assumptions but to ignore a wealth of data to the contrary.

The Department received numerous comments that the site has been shown to be contaminated with vast quantities of toxic waste. There was even a comment that the installation of the barn will cause explosions that will release poisons that will harm people miles away. Such scenarios run contrary to a vast array of sampling data and historical information known about the Jamestown Landfill.

6. Disclaimers in the GZA Report

The Department has read the disclaimers in Section 9 and Appendix A of the document. They basically state that conclusions are based on available data and that interpolations and extrapolations are subject to limitations. Such disclaimers are standard wording in the fields of engineering and hydrogeology and do not invalidate the plan presented.

7. Pump Testing

The Department received several comments relative to pump testing. A pump test was performed on the proposed Lot 47 potable well to test its influence at the proposed pumping rate on wells within the landfill. In the field of hydrogeology, pump tests are used primarily for two purposes:

- To test the capacity of a well to produce water in a certain aquifer.
- To explore the limits of influence pumping one well has on other wells in the aquifer. This is important for the placement of capture wells in pump and treat systems and for evaluating the effect of pumping a supply well on the aquifer.

Pump tests are not normally used to delineate or characterize plumes at a site. Given that the Department's review, however, has been based on the conditions presented, a condition will be included in the final approval limiting the pump rate of the well on Lot 47 to below 200 GPM, unless a further demonstration is provided. The well on Lot 47 is also included in the revised long term monitoring plan for the site.

8. Hydrogeological Assessment of the Island

The hydrogeology of the landfill has been extensively studied, including analysis of the stratigraphy and fracture characteristics. Some commenters have asked why the Department has not mandated a study of the entire island and its water supply. The Department requires investigation to be focused and conducted as necessary and appropriate. The Department required investigation of the hydrogeology of the site and surrounding areas. To require the Town to bear the expense to investigate and study all of the island, which would include the Downtown Area and Beavertail Point, that have no relevance on the remedy for the site, would be arbitrary and capricious.

Geophysical analysis of fractures in the borehole for MW-7 was done to understand the fractures and locate the monitoring well screens with MW-7. The geophysical results were analyzed and debated by geologists from both GZA and RIDEM until the screened intervals were agreed upon.

The Department's initial concurrence with the results and scope of the investigation when a **Program Letter** was issued on May 30, 2003. After receiving public comment and additional information from residents, the Town and GZA, the Department issued its final approval, in the form of a **Remedial Decision Letter** almost one year later on April 22, 2004.

9. Relationship between RIDEM and USEPA

Some comments have stated the USEPA is the governing agency over RIDEM. As discussed in response #5, RIDEM and USEPA have worked cooperatively at the site. However, it is not correct to say EPA is the governing agency over RIDEM or the Town of Jamestown. The USEPA works with RIDEM but does not supervise the agency. If the USEPA believes its regulations have been violated, it is free to enforce any regulations it believes have been violated consistent with the Memorandum of Understanding between the two Agencies. In some programs, through state regulations, the Department also has the power to enforce USEPA regulations. It should be noted that the Department is not aware of any violations of USEPA regulations at this site. As discussed in response #5, in the 18 years the site was on the CERCLIS list, USEPA never required **any** actions of the Town under that program.

10. Office of Water Resources Permitting Issues

In addition to the Office of Waste Management issues, the placement of impermeable surfaces, such as a building and paved road, bring into play the regulations of the Department's Office of Water Resources. While efforts to reduce infiltration are an important component of decreasing leachate generation, such measures, by definition create a need for storm water runoff controls. While such storm water controls could be normally be approved as part of the remedial design without a permit application to the Office of Water Resources, in this case, aspects of the Town's plans go beyond the requirements for remediation alone, and therefore these components of the project do not

qualify for exemption provisions contained within the regulations. The Town therefore must file a Preliminary Determination Application with the RIDEM Wetlands Program. The current review suggests there will need to be alterations made to the detention basin and associated discharge in the vicinity of North Main Road to meet the requirements of those regulations. Also the Rhode Island Pollutant Discharge Elimination System (RIPDES) Regulations will need to be complied with for storm water discharge and building drains and other aspects of construction. Similarly, any Individual Sewage Disposal System (ISDS) onsite will need to comply with ISDS Regulations. As these reviews will be part of the specific permitting by the Office of Water Resources, these comments and issues will be addressed jointly by the Office of Waste Management and the Office of Water Resources in the course of their permit review process.

11. The Uniqueness of Jamestown

Many comments have been about the unique nature of Jamestown since it is an island. The Department believes each site is unique. As previously stated, all landfills, including this one are unique. This is why a Site Investigation Report is required to understand the unique nature of the site. Some factors unique to this site warrant an increased level of concern. For instance, it is an island and the site is surrounded by a GA aquifer. Other factors point to lower hazards such as the following:

- Very low levels of contamination have been found in the soils and groundwater at the site compared to most landfills in the state.
- Borings from the site show it to be underlain by a low permeability till that overlies weathered schist that tends to isolate bedrock fractures at the interface between the overburden and bedrock.
- The area overall is characterized by very poorly permeable soils derived from meta-sedimentary rock of the Rhode Island Formation that has caused the notoriously high failure rate of septic systems in the area.

There have also been comments that the area has no parallel in Rhode Island because the houses cannot be connected to municipal water lines due to the distance from the water lines. There are other site remediation and landfill closure sites further from municipal water lines that have no other readily available source. This is the reason for the Department is as strict as it is with groundwater in GA areas.

When considering the uniqueness of each landfill, the Department tries to bear in mind all the factors that make it unique in order to understand the site. The Department was aware of all the above factors (both those that raise and lower its risks) when it oversaw and approved the investigations.

By the Department's Regulations, Jamestown is not classified as a sole source aquifer as explained in response #4. As explained in our response #2, the Department has dealt with sites on islands where residents rely solely on groundwater, as well as sole source

aquifers. As is also explained in response #4, the Department does give GA aquifers, such as this, the highest level of protection. It should be noted that if the site received sole source designation, it would not forbid the Town from constructing a highway barn at the site, as other designated sole source aquifers have such structures built on them.

Regarding the existence of highly fractured bedrock, all of Rhode Island is underlain by fractured bedrock. Therefore the presence of fractured bedrock in Jamestown does not make this aquifer unique in Rhode Island. The ubiquitous existence of fractured bedrock within the state has given the Department a depth of experience in dealing with such aquifers. This experience will continue to be used to evaluate the project. The consultant for the NECC had made a statement that the aquifer is “highly” fractured but has not provided any information as to how that judgment was made. In hydrogeology, such qualifiers are usually used to speak about units in relative terms such as a highly fractured zone overlying more competent bedrock.

12. Excavation

The Department by policy and regulations requires that if waste is excavated from an inactive landfill, it must be disposed of in accordance with RIDEM Solid Waste Regulations. The Department has allowed such re-interment of waste where an impermeable cap is being placed (such as the Woonsocket landfill). Therefore at this site, the Department will require that all solid waste that is removed be disposed of properly off site at a licensed facility. The Town has requested to screen the solid waste from soils so that soil screenings can be reused at the site for grading and shaping material. The Department will require that the soils be properly sampled and are placed under the upper paved storage area, provided laboratory analysis can confirm the samples meet RIDEM standards. The proposal calls for sampling of Total Petroleum Hydrocarbons, Volatile Organic Compounds, Semi-Volatile Organic Compounds, Polychlorinated Biphenyls, RCRA 8 metals, flashpoint, pH and reactivity. If any of these contaminants exceed RIDEM standards, they will need to be disposed of offsite at an appropriately licensed facility. Sampling will be done at the frequency of one sample per 500 cubic yards, which is compliant with standard Department procedures and past approvals at other sites.

In addition to laboratory analysis of the soils, waste must be field-tested onsite for Volatile Organic Compounds. Such testing, which was also done during test pitting of the site, is a routine precaution. Field-testing for Volatile Organic Compounds does not detect metals, such as lead and antimony and semi-volatile organic compounds that have been found at this site. Metals and semi-volatile compounds do not spontaneously volatilize and therefore do not present the same inhalation risk to workers and residents as volatile compounds.

13. Paving of the Road

Following its review of the 30% Design, the Department requested that the road be paved. After discussions with the Town, the Department is still not willing to waive this requirement. Given the nature of the vehicles that will use the road, the Department maintains its position that the road must be paved. This reasonable requirement is consistent with good engineering practice. All storage, work, truck parking and service areas are to be paved.

The Department believes the road must be paved if trucks will routinely drive on top of the landfill as was stated in comments for the 30% design. Such a restriction is consistent with the Department's requirements at similar sites and with standard engineering practice. The Department also requested paving of the composting area. It is our understanding that the Town is evaluating moving the entire composting area to another site.

14. Monitoring Well Construction and Sampling

Lack of Overburden Wells

As explained in response #1, the Department re-opened aspects of the Environmental Monitoring Plan Review that were affected by the garage or new environmental data provided. Several commenters have asked why there are no overburden wells. The saturated overburden is not deep enough to allow the installation of overburden monitoring wells, so shallow wells are screened in bedrock.

Sampling with Water Supply Pumps

Some comments have questioned the reason why conventional water supply pumps were not used for monitor well sampling. The reason is it would be contrary to both EPA and DEM sampling protocols and would be poor engineering practice. A standard supply well pump will cause volatile organic compounds to escape into the air resulting in underestimating or completely missing this important group of chemicals.

Furthermore, monitoring wells are placed to intercept contaminants at discrete zones within the aquifer. Water supply wells, on the other hand, are designed to draw water from as many different zones within the aquifer as possible. The more water that is mixed in from other zones in the aquifer, the more dilute the sample will become. This causes the sampling to underestimate contaminants present and also homogenizes the results to make them far less meaningful as an indicator of contaminant distribution.

As explained in *response #2*, groundwater is of primary concern to the Department in reviewing this project, which is why the Department is insisting on proven and scientifically valid sampling methodologies.

Construction of Wells within Fill Areas

Some wells, such as EA-1B and the onsite "deep well," were installed within the fill area. Such construction is not recommended under current RIDEM and EPA protocols. In

addition to providing an incomplete picture of contaminant migration, such locations can provide a preferential pathway for potential contaminants to migrate to the bedrock. Given the nature of the area, the Department required that these wells be closed and that other wells be placed at the perimeter of the landfill in accordance with current requirements to better monitor landfill contaminant migration. There have been comments received from the NECC that these wells should be part of the EMP while simultaneously MACTEC, the consultant on behalf of the NECC, has pointed out that these wells were not properly installed and asked that historical data from these wells be discarded. The Department has not been persuaded by either argument. These wells were not constructed according to current standards and should be properly abandoned, but the history of contaminants detected in them is relevant and was considered as part of the Department's evaluation.

Construction of Cluster Wells and Well Pairs

There have been comments as to why no cluster wells, or well pairs have been installed at the site. The most recent well installation (GZ-7) was constructed as a well pair to monitor two different fracture zones in the bedrock. As explained above, construction of pairs to monitor overburden and bedrock is not possible due to the proximity of the water table to the bedrock interface.

15. Dispute over Issues at June 14, 2005 Meeting

On July 14, 2005 the NECC along with their consultant (MACTEC) had a meeting with the Director in which Jamestown officials and their consultant (GZA) were also present. On July 8, 2005 GZA, on behalf of the Town submitted a rebuttal to the NECC presentation. On August 16, 2005 MACTEC sent a response to the GZA response. It contained strongly worded responses to GZA's responses. Some of these responses have been quoted or paraphrased as comments. Our analysis of some of the disputes is shown below. To the extent that those comments bring out technical disagreements, the Department is considering these comments. To the extent that the comments contain personal attacks the Department feels that these lower the quality of the debate and the Department will not respond or consider such attacks as appropriate for the review process.

Contaminants detected in groundwater

MACTEC made the assertion that the following contaminants have been found in landfill monitoring wells above standards: chlorobenzene, 1,2-dichloropropane, vinyl chloride, toluene, bis(2-ethylhexyl)phthalate ("BEHP"), arsenic, beryllium, chromium, lead, barium, cadmium, copper and nickel.

GZA submitted a subsequent response indicating that 1,2 dichloropropene, and BEHP have not exceeded standards. In the last 8 rounds only antimony, cadmium, and lead have exceeded MCL's. Copper has also exceeded the MCLG (aesthetic standard).

The Department reviewed the correspondences. BEHP was detected in one sample at well EA-2D on December 7, 2000 above the MCL of 6 ug/l and GZA was mistaken in their assertion that it had not been detected above MCL's, although they believe, based on its detection only once, that it may be derived from plastic in the wells and not the site. Although 1,2 dichloropropene was not detected above MCL's, 1,2-dichloropropane, the chemical MACTEC had listed, was present. It should also be noted that some of the chemicals listed by MACTEC are not believed to be site related and may reflect natural background conditions, specifically beryllium and barium.

Lot 47 Pump Test

In MACTEC's presentation they asserted the placement of monitoring wells was inadequate and pump testing has not been done. As part of GZA's response they asserted that the Lot 47 well had been extensively tested and will not impact groundwater flow. MACTEC's response quotes GZA's Transaction Screen Report of 1999 that states that exactly what fractures the well draws from cannot be determined and construction or pumping of the well could alter the groundwater flow. Then in their response, GZA maintains that they do not believe that the well will affect the groundwater flow.

MACTEC said either the laws of hydrogeology have changed or one of the statements must be false. The Department does not believe this is the case. It is very reasonable to believe that at low rates, the well will not impact groundwater flow but if the rate were increased or pumping from other nearby sources increased, it could at some point affect the groundwater flow. The critical term GZA used in 1999 (prior to the pump test) is that the well "**may** have an additive effect on groundwater migration patterns" [emphasis added]. That being said, GZA cannot say with absolute certainty, as they say in this response, that the well **will not** impact groundwater flow. It can be reasonably concluded that it will not have an affect at the proposed flow rate, however at some higher flow rate the radius of influence will most certainly be expanded. In consideration of possible increased pumping rate or the possible cumulative affects of pumping additional wells, a condition will also be added to the final approval that requires the Lot 47 well pump rate be maintained below 200 gpm, the test rate, unless/until alternate data is proved to indicate a higher pumping rate does not pose a threat. The Department also reserves the right to require placement of additional wells based on changes in aquifer use.

Direction of Groundwater Flow at Viera Farms

GZA's response indicated the Viera Farms wells are not down gradient and may contain VOC's from onsite disposal. MACTEC in their response pointed out that GZA said in their 1992 site assessment that Viera Farms was down gradient of the landfill and the landfill was the probable source.

MACTEC is correct in their assertion that GZA, in their study of the Viera Farms property in 1992 did conclude that there was no onsite source of the VOC's observed. While GZA did not actually state in their response 9 that the VOC's came from an on-site source, however, it is implied by their statements that there is on-site disposal and that the

wells are not down gradient. To that extent, the Department believes it makes an inaccurate implication.

Having looked at the data, the Department believes that while the Viera Farms is not technically down gradient of the landfill, it is very close and cross gradient of it, and the Department reviews and approval have taken this into consideration. Also surface water flow followed by infiltration may affect groundwater in areas not downgradient of the site.

See response #28 for the Department's analysis of the Viera Farms data.

Onsite Sewage Sludge Disposal

In their presentation, MACTEC indicated that waste was landfilled until 1987. The GZA response was that landfilling stopped in 1984 with sludge accepted until 1985. MACTEC in their response quoted the Screening Site Inspection done by EA in 1991 and a letter from RIDEM in 1999 showing that sewage sludge disposal took place well after that.

The Department reviewed the information and found that much of the issue relates to the semantics of the term "disposal". The Screening Site Inspection Report indicates GZA is correct that landfilling of solid waste stopped in 1984 and disposal of sewage sludge in trenches ceased in 1985. The acceptance for disposal MACTEC refers to in their rebuttal (also quoting the Site Inspection) involves the mixture of sewage sludge and wood chips as part of a composting operation, not a landfilling operation. The Site Inspection Prioritization report of October 1992 also supports this conclusion.

16. Karst Aquifer

Some comments refer to underground "lakes" or underground "pools" making up the aquifer in Jamestown. The commenters seemed to be misinformed about the nature of this aquifer. Underground pools of water are characteristic of karst topography, which we do not have in this area. The groundwater in this area is both stored and transmitted in fractures. Physical disturbance is not the mechanism by which such aquifers are threatened. The primary mechanisms of contamination are diffusion of contaminants into the fractures and migration of the groundwater, either by natural flow or pumping of the aquifer. The current monitoring strategy is designed to detect such contaminants migration based on sound geological principles.

17. Projected Pumping Rates of Lot 47 Well

We have received public comments that the pumping at the site may exceed the pumping rate that was done for the pump test on Lot 47. The Department agrees and believes that the EMP should be modified to include that supply well. Appendix D of the 50% Design does propose addition of this well to the Environmental Monitoring Plan. The approval

will also be conditioned to restrict the pumping rate of the Lot 47 well consistent with the data provided.

18. Brownfields: Laws and Regulations

The Department has received comments that the Brownfields approach is a bad concept. The Rhode Island General Assembly passed the Industrial Property Remediation and Reuse Act (CHAPTER 23-19.14) and it is not within the power of the Department to override or ignore the laws of the State of Rhode Island. Similarly, some comments have said that this statute was never meant to apply to sole source aquifers. In reading the statute and legislative intent, there is no suggestion that it was meant to exempt any part of Rhode Island. Regarding sole source aquifer designation, please refer to response #4.

There have also been comments that it is the responsibility of the Department to find uses for sites that have been properly remediated. The selection of the end use is not the Department's responsibility in the oversight process, it is the role of the town. The Department's role is exclusively to ensure the remedy is protective of the human health and the environment based on the end use proposed by the property owner (consistent with local zoning requirements).

19. Possible Impact from Highway Barn Activities

As explained in response #3, if the barn were built on a non-contaminated site that did not contain a landfill, the OWM would have no jurisdiction over the matter whatsoever. Therefore, the Department's role only relates to how the highway barn will affect the landfill closure. These wells may prove useful in detecting any possible contamination from the transfer station or proposed barn even though their original purpose was to monitor the landfill. If there should be a truck accident or other incident that may cause a leak of gasoline or hydraulic fluid, this would be completely unrelated to the landfill. If Jamestown moved the location to lot 47 or any other location in the Town, such monitoring wells would not be required. Virtually every other community in Rhode Island (including New Shoreham which is a designated sole source aquifer) maintains a public works garage and none of them were required to install a network of wells around the facility upon construction. Therefore it would be arbitrary and capricious of the Department to require it here.

Some commenters have asked if an uncontaminated property can be found. As we stated in response #3, this is the Town's decision. From a wider environmental perspective, it would not be logical to locate the proposed DPW facility over an uncontaminated site should be found so that if contamination occurs it will occur over a pristine and unmonitored portion of a GA aquifer is flawed.

The location of the highway barn does increase the complexity of the continued operations of the public works facility and of the closure. A closure where subsequent

uses are passive has a more predictable set of site expectations. A more complex closure has certain financial, scheduling and technical impacts (or aspects) that are being left to the town to consider.

20. Private Well Sampling and Contingency Plans

Officials of both RIDEM and RIDOH have had discussions with both the NECC and the Town of Jamestown regarding private well sampling and contingency planning. The Department also received a comment from RIDOH offering to work with the Town on contingency planning and incorporating that into the process. The Town has paid for the entire cost of the private well sampling program. As per RIDEM Remediation Regulations, the Department considers the Town responsible for the cost of private well sampling and if contamination occurred due to landfill activity, the Town is responsible for the cost of remediation.

One such meeting occurred on June 14, 2005 at RIDEM Headquarters. There have been several comments that quote Dr. Robert Vanderslice of the RIDOH as saying it is not a matter of **if** but **when** this project causes contamination of private wells. We have spoken to Dr. Vanderslice directly regarding his statement. Dr. Vanderslice said he was advising the Town on the wording of contingency plans in general in regards to how to deal with positive results in wells (whether contamination from piping, onsite activities or offsite sources) and **was not** drawing any conclusions regarding this landfill or this project. Another comment attributes this same quote to Dr. Sullivan at the meeting. Dr. Sullivan also denies making such a statement.

The Department's Regulations also include EPA approved methods to statistically evaluate the groundwater data throughout the entire post closure monitoring period. That ongoing evaluation process is designed to trigger additional incremental response actions, should environmental data suggest they are warranted.

21. Hiring of Consultants

Some commenters have said that they wish the Department would prohibit the Town from using GZA to work on the project. One reason given is that they have already had involvement with the landfill closure. Another reason is the disputes discussed in response #15.

It is totally outside the Department's authority to tell the Town whom they may hire as a consultant or Town employee. Similarly the Department would not tell the NECC that they couldn't hire MACTEC in the future. Both parties are within their rights to hire whomever they wish.

22. Landfill Closure Policy

There have been comments that the closure is not compliant with the Landfill Closure Policy. Our policy contains the following statement:

As some of the requirements of Rule 2.1.09 of the Solid Waste Regulations may not be applicable to all of these inactive landfills, the Department may grant a variance from one or more of these requirements, as long as all documentation and information necessary to support the variance has been provided.

The Department concluded in 2004 with its Remedial Decision Letter that the SIR provided the necessary documentation to support the variance in conjunction with the remedy. Specifically sufficient documentation was provided to show that the environmental risks were adequately addressed by the proposed remedy. Therefore, the requirements of the regulations and the policy have been met. To apply the policy to mean that this site, although it contains lower levels of contaminants than many other sites in GA areas, must have an engineered cap would be inconsistent and unjustified.

23. Other Similar Uses at Landfills

The Department received many comments that the proposed industrial use has not been allowed at any other site where residents rely on groundwater as their only source of drinking water. The Department compiled the below listed information of other landfills over GA aquifers where municipal water lines are not available. In addition to the above listed characteristics, some are located over community wellhead protection areas. Some, like the Richmond public works garage, were simply built on the landfill property with no hydrogeologic studies at all.

The Department has also received comments that this site cannot be compared to sites such as Hopkinton and Exeter because those sites can easily be connected to municipal water lines. Neither community has ever made that representation to us and in fact, neither municipality even has a municipal water system (Hopkinton has a very limited tie in to the Richmond system that services only Main Street in Hope Valley). Furthermore the sites are approximately 4.3 and 6.3 miles away from the nearest municipal water systems. Therefore, to connect to an existing municipal system, these communities would have to physically and legislatively create an entire municipal water system, have another municipality give them water and build at least 4 to 6 miles of municipal water lines just to connect to a neighboring system (if capacity existed). To do so would hardly, as the comment implies, be a simple matter compared to Jamestown.

Landfill Use/Reuse Data for sites in GA Areas not Served by Municipal Water Lines

<i>Name</i>	<i>Within Wellhead Protection areas?</i>	<i>Current Usage</i>
Burrillville Landfill No.1	N	Leaf and yard waste composting facility, transfer operation and D.O.T. salt storage
Burrillville Landfill No.2	N	Vacant- engineered cap.
Exeter Landfill No. 1	N	Vacant
Exeter Landfill No. 2	N	Transfer Station
Foster Landfill	N	Vacant
Glocester Landfill	Y	Transfer station, leaf and yard waste composting operation, and animal shelter.
Hope Town Dump	N	Vacant
Jamestown Landfill	N	Transfer station, leaf and yard waste composting operation, proposed DPW Garage.
Little Compton Town Dump	N	Western portion of landfill contains leaf and yard composting operation. Transfer station and firearms qualifying range on-site also proposed cell phone tower.
Narrow Lane (Charlestown) Landfill	N	Mostly vacant some storage of gravel.
New Shoreham Landfill	N	Transfer station and recycling center
Ninigret National Wildlife Refuge Landfill	Y	Wildlife Refuge
North Scituate Town Dump	N	Vacant
Portsmouth Melville Dump	N	Vacant
Prudence Island Landfill (Disposal Area)	N	South Prudence Bay Island Park
Richmond Landfill	Y	Storage of DPW stockpiles on landfill, dog park, Ball field (proposed)
DPW Transfer Station operations partially encroach on fill area, also possible encroachment of Public Works Garage.		
Scituate Town Landfill	N	Vacant
West Greenwich Landfill	N	Transfer station expansion proposed to go onto filled area

24. Information located at the NECC.org Site

A number of comments have referenced the above listed web site, particularly in reference to the workshop of February 1, 2006. The Department has reviewed this web site and the characterizations of the meeting are from our view both inaccurate and filled with ad hominem attacks against the speakers at the meeting. We feel this lowers the quality of the debate to name calling, therefore it should not be considered a factual reference. Furthermore, some of the information on this website is inaccurate and is being used to instill a sense of fear rather than provide factual and rational information.

25. Cancer Rates in Jamestown

The Department has received a number of comments regarding cancer rates in Jamestown and particular cancer diagnoses. It is the Department's role to keep contaminants, particularly carcinogens, from releasing to the environment, including the groundwater.

Explaining cancer rates in general, or individual cases involves complex factors such as genetics, lifestyle, socio-economic status as well as environmental exposure. If any cases of cancer are suspected to have an environmental cause, we would ask that the physician who diagnosed the disease please call Dr. Robert Vanderslice (222-3424) to ensure that the RI Department of Health has the opportunity to conduct the appropriate follow-up. The state has also coordinated with US Department of Health and Human Services in the past, the federal counterpart to the state Department of Health.

26. Lot 47 and Summit Avenue as Part of the Site

Some comments have pointed out the ambiguity as to whether two adjacent properties (Lot 47 and Summit Avenue) are part of the site or not. As these sites do not have waste, they are not inherently under the jurisdiction of the Office of Waste Management. Historically some documents, like the Screening Site Inspection, do list Lot 47 as part of the site. To the extent that they have drainage structures on them that are part of storm water management, they are jurisdictional regarding any storm water or RIPDES permits, therefore, for these permits, they are part of the site. The relationship to this property increases in importance with increased storm water discharge if the site is developed with the barn and associated paving requirements.

In the exchange of letters discussed in response #15, MACTEC criticized GZA for referring to Lot 47 as part of the site, saying it is “indicative of their lack of attention to detail”, and yet in the same documents, MACTEC refers to the supply well on Lot 47 as an “On-Site” well. This is indicative of how confusing the definition of “site” can be.

27. The Application of Health Based Standards

The Department, like many other environmental agencies, has become conscious in recent years of the role of environmental justice in decision making. As explained in response #11, the Department views each site as unique. For this reason, some sites, such as those over drinking water aquifers or those with high levels of contamination, may be required to construct more rigorous source control measures than other landfills based on the threat posed to environmental or human health receptors.

The Department, as well as the Department of Health, have adopted standards, such as EPA’s MCL’s that specify contaminant levels in drinking water, below which exposure to humans are acceptable in terms of calculating risk. There have been comments that the MCL’s should be discarded and stricter levels should be created and enforced for private wells around this site. Some comments have further stated that drinking water standards should be created and enforced for this project for compounds that are not presently regulated.

MCL’s are legally enforceable in both law and regulations for both public water supplies and for determining compliance with drinking water aquifer standards that are well

supported by current science following lengthy public notice. The Department does not have the authority to rewrite statutes and can only adopt new regulations after careful scientific study. Issuing drinking water standards that are either unique to a particular site or are not adequately supported by scientific documentation is inappropriate for a least two significant reasons:

- Requirements that place unreasonable burdens on a single property owner will likely be found to be arbitrary and capricious in violation of statutes and
- A drinking water standard that provided more protection to one community would affect say that the health of that community is more important than the health of other communities.

The concept of environmental justice is based on the concern that some groups, particularly those in minority or low-income communities are subjected to more environmental contamination. To create separate numbers that apply only for this project would be to violate the concept of equal protection and environmental justice.

28. The Viera Farms Property

In 1992, GZA performed an environmental assessment of the adjacent property, known as Viera Farms. The site had been issued a violation for illegally filling wetlands in 1986. As part of this evaluation, monitoring wells near the landfill were monitored and found to contain low, part per billion levels of VOC's including 3 ppb of vinyl chloride which is above the Maximum Contaminant Level (MCL) of 2 ppb. Based on the proximity of the wells to the landfill and the contaminants detected, the Department believes that the landfill was and is the source of the contaminants. The original GZA study concluded the same. However, the lack of laboratory analysis of the illegal fill material cited in the 1986 Notice of Violation creates the possibility that the fill brought on-site by Viera Farms is the source of the contamination. It has been the Department's experience that illegal dumping is rarely if ever accompanied by analysis of the fill being dumped. Therefore, it cannot be positively ruled out that the fill material was uncontaminated given the presence of many of these compounds (such as toluene, xylene and vinyl chloride) in many different types of materials. Given the fact that detections were in the low ppb range, and their occurrence was sporadic, it is difficult to definitively rule out either the Viera Farms fill or the landfill as a source of the VOC's.

In short the Department does not accept GZA's 2005 implication that the Viera Farms is the source of the contamination. However, the Department also does not accept the contention of the NECC that there is irrefutable proof that the landfill is the source of the contamination found in these wells.

At the time the EMP was being designed, the Town reported that they had been denied access to the Viera Farms property for the purposes of well sampling. The Viera Farms monitoring wells were not included in the approved EMP as it was determined that monitoring wells at the perimeter of the landfill provides a better early warning system of contaminant detection than offsite wells and avoids the issue of disposal at the Viera Farms property.

29. Geophysical Methodologies

Form letter 3 claims that other communities have used sonar and x-ray viewing to complete hydrogeologic studies prior to constructing buildings on landfills and ask that this should be done here. The commenters are misinformed regarding sonar and x-ray analyses that supposedly have been done with other communities for their bedrock fracture studies. Neither is an effective technique in investigating bedrock fractures or aquifers and neither has been used at any sites in Rhode Island to our knowledge. See *response #8* regarding geophysical studies that have been done at this site.

30. Coastal Resource Management Council Review

The Department has determined that the site is not within the jurisdictional area of CRMC; therefore a permit from the agency will not be required. All sites within the state do eventually drain to coastal areas, however this is not the criterion that make a site jurisdictional to the CRMC.

31. Closure at the Block Island Landfill

The Department has received comments that the Block Island Landfill should be the model for closure in Jamestown and that their consultant should be hired here. The landfill on Block Island was never closed or capped. The Town has not yet volunteered to join the landfill closure program. Also a building was constructed on the site without a geological or hydrogeological study submitted to the Department. Unlike the Jamestown Landfill, this landfill is still undergoing investigation under the federal CERCLIS program, and the Department is involved in that investigation. Investigatory activities occurred on Block Island as recently as the summer of 2005. As part of the investigation, the Department found exceedances of GA standards for lead, beryllium, cadmium, chromium, nickel and thallium in 2005. Historically, onsite wells have also shown exceedances of methylene chloride, trichloroethene and 1,2-dichloroethane. Given the above, the assumption that the Block Island Landfill should be the model that the Jamestown Landfill should follow is questionable.

32. Closure at the Woonsocket Landfill

A newspaper article was submitted regarding the different closure mechanisms of the Woonsocket Landfill and another landfill located along the Blackstone River in

Worcester. RIDEM is overseeing the construction of an engineered cap on the Woonsocket landfill as the nature of hazardous waste and other site-specific characteristics, such as groundwater results, justified it to protect human health and the environment. As explained in *response #4*, every landfill is unique. The Department cannot comment on the decision of the Massachusetts DEP on the landfill in Worcester, as the Department was not involved with the decision.

33. Alteration of Surface Water Flow

The Department has received comments that the proposal will alter the direction of surface water flow. This is correct. The SIR demonstrated that existing surface water flow patterns cause ponding over the landfill leading to infiltration into waste and leachate generation. The remedy is intended to alter this pattern in order to divert surface water flow to areas that are downgradient of waste storage areas. As explained in *response #10*, storm water management will have to comply with all The Department's RIPDES and Wetlands Regulations.

34. Characterization of the Landfill as Relatively Benign

At the public workshop for the 50% Design, personnel from the Department made a statement that, in comparison to many landfills in the program, this site is relatively benign. The Department has received comments questioning what information this statement is based on. Some comments have also said it shows a lack of objectivity. The landfill has been the subject of extensive study that included sampling of groundwater, soils and sediments. The levels of contaminants found at this landfill are low by comparison to many landfills in the Landfill Closure Program. In the last 3 rounds of groundwater sampling, all onsite-monitoring wells met drinking water standards. In the Department's experience it is very unusual for a landfill to contain such low levels of contamination. While the Department strives to be objective, it does not view this as incompatible with drawing reasonable scientific conclusions based on years of data. See also *response #5*.

35. Passive soil gas sampling for VOC's

A comment was received by Loitherstein Environmental that further delineation of the chlorinated organic compounds in groundwater should be done using passive soil gas sampling. It is unclear what information was reviewed to formulate the comment and proposal. Volatile organic compounds at the landfill typically occur in the low part per billion range. Chlorinated volatile organic compounds are a very small component of the organic compounds historically detected. As discussed in *response #1*, assessment work

was found to be adequate. The Department believes an additional soil gas survey is not advisable when contaminant levels are being found around the detection limit.

This comment came with a proposal and cost estimate for Loitherstein Environmental to perform the work. Although it was not the intent of the public comment to solicit bid proposals, as explained in comment #21, both the Town and the NECC are free to hire the consultants they wish.

36. Placement of Drainage Collection and Discharge Locations

Some comments have stated that the catch basin will discharge storm water to the waste underneath the soil cap.. The Department's review of the 50% Design shows that all catch basins discharge to points downgradient of the landfill (points west of the fill material or east of the surface water divide). It is also our understanding that storm water detention basin #2 is upgradient of waste east of the landfill but will be lined so as to prevent direct infiltration. However this basin design needs to undergo further review with the Office of Water Resources as per response #10.

Also, there have been comments that discharging storm water to wetlands or lot 47 is discharging "contaminated water" to these sites. The purpose of collecting storm water is to collect the rainwater **before** infiltration, thereby eliminating the potential risk of contamination. It is not accurate to refer to the rainwater channeled away from the landfill as "contaminated" because it flows on top of or near a landfill, and has not come in contact with the waste.

ATTACHMENT C

**RIDEM/OFFICE OF WASTE MANAGEMENT
SUMMARY AND RESPONSES TO
LETTER FROM DAVID B. VAN SLYKE
(Preti, Flaherty, Beliveau, Pachios & Haley LLP)
RECEIVED 2/10/2006 FOR THE REMEDIAL
ACTION WORK PLAN AND 50% DESIGN
DRAWINGS**

FORMER JAMESTOWN LANDFILL

JANUARY 2006

Prepared July 6, 2006

As part of the public comments the Department received a comment Letter (#7) from David B. Van Slyke (Preti, Flaherty, Beliveau, Pachios & Haley LLP) and an attached letter (#8) from Jeff McCrady and Stephen H. Mitchell, P.E. (MACTEC) on 2/10/2006. Both were submitted on behalf of the North End Concerned Citizens. Due to the detailed discussion of technical and legal issues, a summary of these two letters and the Department's responses are detailed in this attachment. All other public comments are contained in Attachment A. In some cases these issues have been raised in other public comments and the responses refer back to the Department's responses in Attachment B. However, where these issues are unique to these comments, the response is listed here.

1. The site has been inadequately characterized.
 - A. The monitoring well network is inadequate and sparse.
 - B. No monitoring wells are located in the overburden
 - C. There are no well pairs to determine vertical gradient
 - D. The public works facility was not contemplated in the site investigation.

See response #1, Attachment B.
2. The landfill cover system does not comply with RIDEM Regulations or its Landfill Closure Policy
 - A. The soil cap does not control migration.
 - B. The cover system is not a low permeability cap

See responses # 1 and 2 , Attachment B.
3. The site does not have an adequate post-closure environmental monitoring program
 - A. The Site Investigation was faulty
 - B. This is a completely different closure approach

See response #1, Attachment B 1.
4. The proposed landfill closure design allows the Town to avoid storm water management requirements by increasing storm water discharge into landfill waste, thereby creating more landfill leachate that will threaten the island's aquifer

We have reviewed the 50% Design and it does not call for any storm water discharge to areas filled with waste or to any areas upgradient of filled areas so the assertion is based on inaccurate information. The issue of storm water discharge is important and the Town will need to meet all the requirements of the RIPDES and Wetlands Regulations as explained in responses #10 and 36, Attachment B.

Letter # 8: Jeff McCrady and Stephen H. Mitchell, P.E. (MACTEC, 2/10/2006)

This correspondence was submitted as an appendix to the previous letter from PretiFlaherty and is written on behalf of the NECC. For clarity, MACTEC headings and comment numbers are included.

Site Background/Site Investigation Summary (MACTEC comments 1-4)

5. GZA believes the waste to be overlain by low permeability glacial till, but the test pit logs indicate the cover to be sand and silt.

The Department concurs that this is confusing. We contacted GZA and they clarified the statement about reworked till as specific to the area below the proposed DPW facility. The Department will require that the statement and the observations upon which it is based be clarified in future submissions. As stated in previous comments, the Department has evaluated multiple years of site specific environmental data, and believes the remedy is protective of human health and the environment.

6. The plan does not meet the requirements of 40 CFR 258.60 which requires that a final cover system must have a permeability less than or equal to the permeability of any bottom liner or natural subsoils present. Therefore the Town must insure the cover system meets this requirement.

40 CFR 258.1 (c) clearly states that:

These criteria do not apply to municipal solid waste landfill units that do not receive waste after October 9, 1991. As the site ceased landfilling in 1984, this regulation is not applicable. For more information you may wish to consult with EPA New England.

7. Cover soils were not tested for pesticides, PCBs, dioxins or furans and should be. Early reports suggest the navy dumped transformers at the landfill.

As discussed in response #1, the Department has already approved the Site Investigation Report and associated remedy and is reopening the process only as it relates to the modified use of the property.

8. MACTEC believes the statement regarding the last 4 rounds of groundwater sampling does not completely explain the following issues:

- A. GZ-7S and GZ-7D were only installed in July and well EA-2D is at times dry
- B. Other wells were not installed in accordance with industry standards and data from them should not be used to characterize the site.
- C. The document did not contain the December 2004 data that showed an MCL exceedance of copper.

GZA could have provided significantly more detail on the well installation and sampling but the Department does not believe such detail is necessary to review the 50% design. Furthermore, the entire EMP is an appendix to this document. See response #14 regarding monitoring well construction.

The copper exceedance of December 2004 is not shown in the table on page 3. It should be noted this is not an MCL but an MCLG meaning it is a non-enforceable standard based on aesthetics, and is not a health based standard.

9. Landfill gas monitoring is limited to methane. VOC sampling in the soil gas should be done for the following reasons:

- A. The nature of wastes is largely unknown
- B. VOCs have been detected in the groundwater
- C. Gas sampling should be done for VOCs, SVOCs and petroleum hydrocarbons.

As discussed in response #1, the Department is reopening the process only as it relates to the

modified use of the property. Given the sampling that has taken place, the Department does not believe it is not accurate to say the nature of the waste is largely unknown. See also response #35 regarding passive soil gas sampling.

Remedial Actions- Groundwater (MACTEC comments 5-6)

10. The EMP should be modified to include the following:

A clear understanding of potential flow pathways for groundwater and potential contaminants transfer from all site activities in both overburden and bedrock

See response #1, Attachment B.

11. There are no wells in overburden

See response #14, Attachment B.

12. The monitoring well network must be more closely spaced to monitor any potential releases from activities at the DPW garage.

See response #19, Attachment B.

13. The groundwater underneath the site was reclassified in 2005.

A. How will the Town monitor the GB/GA areas?

B. How will the monitoring ensure there are no exceedances in GA areas?

C. Will there be monitoring to ensure GB and GA regimes do not show trends that will impact GA areas.

The Department reclassified the groundwater in June of 2005 after public notice and no public comments were received. Such reclassification was a part of the approved EMP and does not relate to the 50% Design. The approved EMP includes point of compliance for groundwater sampling.

Landfill Cover System (MACTEC comments (7-10))

14. The landfill cover system does not meet the requirements of the Landfill Closure Policy or the RIDEM Solid Waste Regulations.

See response #22, Attachment B.

15. RIDEM solid waste program is delegated from the Federal Program and must be consistent with and no less stringent than the Federal Program. Closure is not consistent with 40 CFR 258. Why are these regulations not applicable to DEM's review?

Following the promulgation of RIDEM Solid Waste Regulations in 1992 the USEPA compared those Regulations to 40 CFR 258.40 and found them to be at least as stringent. However, MACTEC misunderstands the Rhode Island Solid Waste Program. This program enforces RIDEM Solid Waste Regulations and their parent statutes. It is not a federally delegated program and does not have the authority to enforce 40 CFR 258 except for those portions incorporated by reference in RIDEM Regulations. In addition we believe 40 CFR 258 is not applicable because of 40 CFR 258 (c) that states:

These criteria do not apply to municipal solid waste landfill units that do not receive waste after

October 9, 1991.

The landfill ceased to accept waste in 1984. The Federal Regulations state the landfill must receive waste after October 9, 1991 and do not make any reference to Rhode Island Certificates of Closure. As the Department has not been delegated to enforce 40 CFR 258, MACTEC may wish to consult EPA New England.

16. How does the existing soil cap satisfy state and federal regulations?

See response #1 and #22, Attachment B

17. A variance must be submitted with an opportunity for review, comment and approval.

The approved SIR and the associated review, comment and approval of the remedy satisfied the requirements of the regulations, see also responses #1 and #22, Attachment B.

18. Appendix C was not available for download from the web site. Once such information is received from the Town, such analysis will be undertaken and provided to RIDEM. MACTEC reserves the right to provide further comments on this matter.

When the plan was received it was immediately made available to the NECC and other interested parties for review. Norma Willis from the NECC reviewed the document at RIDEM Headquarters within 2 days of its receipt by the Department. At the Department's request, copies of the entire document were made available at both the Jamestown Public Library and Town Hall. Furthermore the Department never received a request for this appendix from MACTEC and the Department cannot extend the comment period because MACTEC chose not to review the document that was made available at 3 public locations.

Site Storm water Management (MACTEC comments 11-21)

19. A larger storm water management system may be required to handle the additional runoff created by the proposal and RIDEM's additional paving requirement outlined in the 30% Design comments. Will RIDEM's request for the access road to be paved, as per the comment on the 30% Design, be complied with (paving was not shown in the 50% Design)?

The Department believes these are valid concerns, see response #13, also as per response #10, the Department may require changes to the retention basin design as required by RIPDES and Wetlands Regulations.

20. With a low permeable cover system, will the storm water management be adequate.

Such a cover is not proposed see also response #10, Appendix B.

21. MACTEC had a number of specific questions regarding the storm water design and calculations. Among them were the following:

- A. What runoff curve number is proposed?
- B. Storm water is discharged to a private residential property. What are the regulatory ramifications of this?
- C. How will the level spreader on North Main Road be protected from vehicle damage?
- D. A level spreader will be required on Lot 47.
- E. What is the nature of floor drains and storage tank at the transfer station?

F. A Storm Water Pollution Prevention Plan will be required.

G. The site must comply with MS4GP requirements

For those aspects of the Town's plan that go beyond the remedial measures qualifying for a wetlands exemption, this will be part of the review under the Wetlands Program and the concern will be forwarded to the Office of Water Resources for consideration.

22. WQ Basin 2 and Detention Basin No. 2 both rely on infiltration of storm water. Detention Basin 2 infiltrates just up gradient of the landfill boundary and WQ basin no. 2 infiltrates partially within the landfill boundary.

See responses #10 and 36.

23. WQ Basin 1 and part of basin #2 should have better sedimentation controls.

See response #10.

24. Storm water is discharging to Lot 47 that is a residential property. Is a zoning ordinance being proposed?

See response #3 of Attachment B regarding Town Authorities.

25. What will be the nature of bathrooms, floor drains, and under-drains at the new facility?

As per response #10, this will be part of the review under the RIPDES, Wetlands and ISDS Programs and the concern will be forwarded to the Office of Water Resources for consideration.

26. The underdrain outlet is a source of leachate.

It is the Department's understanding that the underdrains will not discharge to the filled areas or any areas upgradient of filled areas. We expect this to be clarified in the 90% Design Submittal.

27. Will there be a subdrain at the facility?

All of the detail regarding subdrains is not contained in the 50% Design. When the 90% Design is submitted, the design of the subdrain will be evaluated to ensure it meets RIPDES requirements as per response #10.

28. Storm water discharge if it is contaminated with leachate will be illegal under RIPDES regulations. Will these regulations apply?

The Department's review and understanding is that the storm water will be collected prior to contact with waste. Therefore it will not be contaminated from the landfill. The Design will need to comply with all RIPDES requirements as per response #10.

Landfill Gas Management (MACTEC comments 30-32)

29. What landfill gas monitoring will be required?

Landfill gas monitoring has not been altered from the EMP except those that relate to monitoring of the buildings. The Department's standards require that methane levels not exceed 25% LEL at the property boundary. Additionally, the Department believes that the building will need methane monitoring due to its location within the landfill property boundaries. Such

building monitoring systems have been required at similar facilities in the state as a safety precaution.

30. What will be the response levels for methane? What activities will be restricted?

We expect such a response level to be detailed in the 90% Design. The response level will dictate the need (if any) for restriction of activity.

31. MACTEC recommends a landfill gas mitigation system be installed.

Landfill gas sampling as part of the SIR did not indicate any exceedances of the requirements set forth in the regulations (25% LEL at the property boundary). As per response #1, this issue is not being revisited.

Waste Excavation and Disposal (MACTEC 33-35)

32. The shed may be demolished and landfilled onsite in the proposed plan

As per response #3, all material meeting the definition of a solid waste generated by onsite activities shall be disposed of offsite at an appropriately licensed solid waste management facility.

33. Testing of excavated and separated soils does not include metals testing.

See response #12.

34. Waste excavated should only be relocated to paved areas within the footprint of the landfill.

See response #12.

Erosion and Sedimentation Control MACTEC 36-37)

35. Staked hay bales should not be used for Sedimentation Control in disturbed areas of the site.

See response #10.

36. All drainage channels should be lined with riprap.

See response #10.

Yard Waste Compost Area (MACTEC 38-40)

37. The depiction of final cover of the composting area does not depict the extra two feet of cover and the slope requirements under RIDEM Solid Waste Regulation #8.

The Department concurs and the 90% Design must demonstrate compliance with Solid Waste Regulations #8. Please refer to response #13.

Site Utilities (MACTEC 41-45)

38. MACTEC had several comments (41-43) regarding the specifics of the proposed ISDS system.

See response #10.

39. The lot 47 well had a pump test to determine its adequacy to supply water to the proposed DPW

facility.

- A. Is 200 GPD an adequate supply for the facility
- B. Are large quantities of water needed for maintenance activities
- C. Does RIDEM has pump test results
- D. Will higher pumping rates impact the landfill?
- E. Will the water supply be subject to public water system requirements?

See response #17 regarding pumping rates and testing. The quantities of water used (and therefore discharged) will be addressed as per Response #10. Pump test results have not been submitted to RIDEM. It is our understanding that as per a December 2005 meeting between the Department of Health and the NECC, the Department of Health stated the following:

A well used to supply less than 25 employees with drinking water would be considered a "private well" and would not need to meet requirements for public drinking water supplies. Although future private well regulations are likely, the Department of Health has no current requirements on the monitoring or use of private wells.

The Department intends to place a condition on the final approval to restrict pumping rates to that conducted as part of the study.

40. 40 PVC jacket pipe with solvent joints may be inappropriate for use in filled areas. MACTEC suggests HDPE pipe with butt fusion joints.

The Town should minimize to the extent practicable, the extent to which potable water goes through filled areas. The plan does call for a geosynthetic clay layers or low permeability soil to line the sidewalls of the trenches. Where it does go near fill material, the selection of pipe material must be justified as compatible with the use (compaction) and leachate characteristics. To date, contaminant levels in wells MW-3, GZ-3 and GZ-4 have been at low levels. Furthermore, the trench should be backfilled with clean soil.

Miscellaneous Comments (MACTEC 46-47)

41. Drawings C-3 and C-4 do not included proposed grading. Proposed contours should be developed.

The Department believes that this will have to be altered in accordance with our comments regarding paving of the road. We expect the 90% Design will have such contours.

42. Site access is not completely restricted to prevent illegal dumping.

The Department believes the need for access restriction is not altered by the proposal or from past Department approvals of the Town's Transfer Station License and is not part of the review.

Comments from 30% Design

In April of 2005, MACTEC submitted comments to the Department on the 30% Design. The document had been made available to the NECC, as it was a public document. The comments were provided to the Town of Jamestown. As this was a preliminary document, and therefore not opened for public comment, the Department had no regulatory authority to require the

Town to respond to it. Some of these comments were reiterated and/or expanded upon by MACTEC as summarized below:

43. The proposed leaching field is within 20 feet of the North Property Boundary. Does this location conform to setback and buffer agreements? (MACTEC Re-Submittal Comment 1)
This comment will be forwarded to the Office of Water Resources to assist them in their review.
44. The drainage channel along the west bank of the landfill indicates storm water velocity is high enough to cause erosion. (MACTEC Re-Submittal Comment 2)
See response #10, Attachment B.
45. The plan shows that almost an acre of woody plants will be left at the site. The roots of these plants will promote infiltration and compromise the integrity of the cover. It is also noted that clearing limits may not be accurate on the 50% Design. (MACTEC Re-Submittal Comment 4)
The Department must weigh the competing factors of root infiltration versus the greater evapo-transpiration and erosion control that deciduous vegetation will provide. Were there an engineered cap in place, this balance would change. Regarding the clearing limits, we expect the plan may change somewhat in the 90% Design.
46. There is a 60-foot strip of waste near the western boundary of the property. It is unclear from the drawings if this waste will be left in place. It is still unclear in the 50% Design. (MACTEC Re-Submittal Comments 6 & 7)
It is also the Department's understanding that this waste will be removed. The Department is requesting that the 90% Design more clearly define the limits of waste removal.
47. Collection of storm water in subsurface chambers and surface swales should consider the potential for exfiltration. (MACTEC Re-Submittal Comment 8)
See response #36, Attachment B.
48. Due to the limited size of the barrier upgradient of the excavation area, it is likely that leachate will circumvent this barrier and the 6 inch ADS slotted wall drain will collect leachate from the area of the DPW garage and discharge it at the toe of the wall. (MACTEC Re-Submittal Comment 9)
See response #10, Attachment B.
49. An outlet device for the Pond should be designed that allows peak flows to be conveyed to the culvert inlet without flooding the road. (MACTEC Re-Submittal Comment 11).
See response #10, Attachment B.
50. The EMP and or SWPPP should require continued monitoring for concentration of lead and zinc in the storm water long term. (MACTEC Re-Submittal Comment 12)
See response #10, Attachment B.
51. Appendix C was not available for download from the Jamestown Web Site; therefore MACTEC reserves the right to provide additional comment on this document. (MACTEC Re-Submittal Comment 13)

See response #17 of this document.

- 52.** Lining of storm water controls should be sufficient to evaluate its ability to withstand flow velocity. (MACTEC Re-Submittal Comment 14).

See response #10, Attachment B.

- 53.** Hydraulic conductivity testing must be done to ensure the cover soils meet the RIDEM standard of 1×10^{-7} . (MACTEC Re-Submittal Comment 17)

See response #6 of this document.

- 54.** A HELP model should be completed to predict the estimated leachate generation of the landfill. (MACTEC Re-Submittal Comment 18)

See response #6 of this document.

- 55.** The 50% Design does not include settlement calculations to show that the landfill will meet 3% slopes required by *Solid Waste Regulation #2*. (MACTEC Re-Submittal Comment 19)

The Department concurs that the Town should provide details on how annual inspections provided under the ELUR will monitor settlement.

- 56.** The landfill as a whole does not have a passive gas venting system as recommended by MACTEC. (MACTEC Re-Submittal Comment 20)

See response #1, Attachment B.

- 57.** What is the plan for decommissioning of existing wells EA-2S, EA-2D and EA-1B? Decommissioning is not included in the plan. (MACTEC Re-Submittal Comment 21)

In accordance with the approved EMP these wells are to be decommissioned. It is the Department's understanding that decommissioning of these wells will be done on a separate (presumably faster) track from closure activities described in the 50% Design, the well closures must comply with all Department standards.